AN AUTOMOTIVE STRATEGY FOR CANADA

REPORT OF THE FEDERAL TASK FORCE ON THE CANADIAN MOTOR VEHICLE AND AUTOMOTIVE PARTS INDUSTRIES

TO

HON. EDWARD C. LUMLEY, P.C., M.P.
MINISTER OF INDUSTRY,
TRADE AND COMMERCE AND
REGIONAL ECONOMIC EXPANSION

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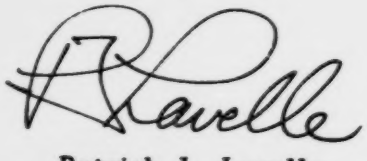
The Honourable Edward C. Lumley, P.C., M.P.
Minister of Industry, Trade and Commerce
and Regional Economic Expansion
House of Commons
Ottawa, Ontario

Dear Mr. Lumley,

We, the members of the Federal Task Force on the Canadian Motor Vehicle and Automotive Parts Industries, appointed by you on December 30, 1982 to consider strategic and policy alternatives for the Canadian automotive industry, have the honour to submit the following report.

Co-chairmen



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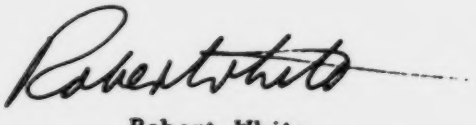

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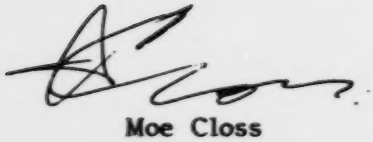

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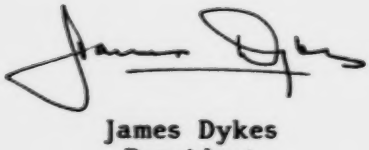

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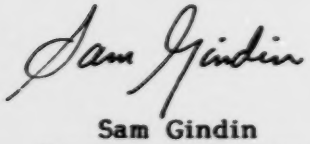

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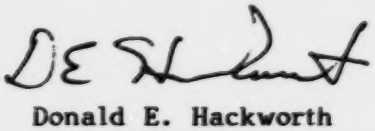

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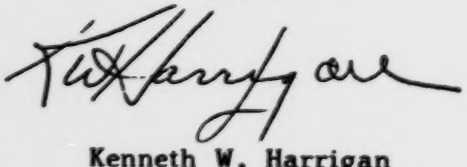

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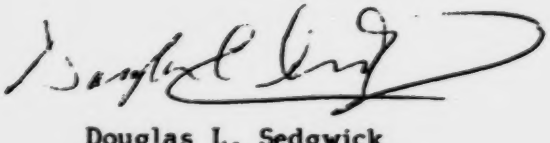

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The Task Force is indebted to a number of people and groups who have, over the course of the past five months, made major contributions to the Canadian automotive industry strategy outlined in these pages.

It would have been impossible to complete this task without the mandate from the Minister of Industry, Trade and Commerce and Regional Economic Expansion, the Hon. Edward C. Lumley, who initiated the process and provided the necessary assistance and advice to enable the report to be completed within a short period of time and at a reasonable cost to the taxpayers of Canada.

The importance of the federal government's role in the study was most professionally enhanced by the participation, as an ex-officio member of the Task Force, of Norm Fraser, Director General, Surface Transportation Branch, and his colleagues Tom MacDonald and Bill Turner who provided sound advice and made important contributions to the data contained in the report.

We are also indebted to The Canada Consulting Group whose staff, headed by Neil Paget, Senior Partner, and David Pecaut, undertook the onerous responsibilities of overseeing the coordination, drafting and production of the report in a limited period of time. They are to be commended for the professional way in which they carried out this assignment.

The Task Force also engaged Rodney de C. Grey of Grey, Clark, Shih and Associates to advise on the implications for our proposals of the General Agreement on Tariffs and Trade and Kathryn J. Randle to edit and coordinate publication of the report.

Finally, we must pay tribute to individual members of the industry and the union whose contributions to the work of the Task Force should not be overlooked. They include Dennis DesRosiers and Morley Bursey of the APMA, Norm Clark of the MVMA, Buzz Hargrove of the UAW, Bob Kiborn and Chuck Struve of Chrysler Canada, William Mitchell and David Rehor of Ford of Canada, and George Peapples and John Todd of General Motors of Canada. They and many others behind the scenes provided assistance and advice that was invaluable to the work of the Task Force.

Although the Task Force is grateful for the assistance of all these organizations and individuals, we bear full responsibility for the contents of our report and for our recommendations.

THE REPORT IN BRIEF

With unemployment at record levels and widespread concern about the future of Canada's economic base, the question of jobs is at the centre of public discussion. The pivotal role the automotive industry plays in our economy, and the radical restructuring this industry is now undergoing, have combined to make an automotive strategy for Canada a critical component of such discussions.

It is in this context that the Hon. Edward C. Lumley, Minister of Industry, Trade and Commerce and Regional Economic Expansion, established a Task Force composed of those groups involved in the direct manufacturing of motor vehicles and automotive parts in Canada. The mandate of the Task Force was to analyze current and future developments in the industry and make concrete policy recommendations for strengthening the Canadian industry.

THE STRATEGIC IMPORTANCE OF THE CANADIAN AUTOMOTIVE INDUSTRY

The automotive industry is Canada's largest manufacturing sector. It employs over 100,000 workers directly (124,000 at the peak in 1979), and supports at least as many indirectly in industries such as steel and rubber, textiles and plastics, glass and aluminum, machinery

and electrical products. Over 60% of Canada's exports of manufactured end products are motor vehicles and automotive components. The numbers in fact understate the significance of the automotive industry to Canadian manufacturing. Many diversified companies with significant levels of production in different sectors nevertheless depend on their solid base in the automotive sector for overall strength and survival.

The strategic significance of the automotive industry stems not only from its importance to our economy, but also from the potential advantages the Canadian industry has. The Canadian vehicle market is the seventh largest in the world. Canada's resource base provides significant cost and availability benefits in regard to energy supplies and future-oriented materials such as plastics and aluminum. Canada has an excellent infrastructure (transportation, communication, utilities) as well as specific expertise in certain key auto-related supplier segments such as steel, where the Canadian product is acknowledged to be of excellent quality and competitively priced.

The Canadian workforce is highly skilled. Productivity, manufacturing quality, labour costs and absenteeism in Canadian automotive plants compare favourably with conditions in automotive plants in the United States, Europe and Australia.

The auto industry creates more value added per worker than the average in Canadian manufacturing, and the industry has historically realized productivity improvements that rank it at or near the top of Canadian industry. Recent major investments, including manufacturing plant and process improvements such as the spread of robotics, will accelerate the rate of productivity growth.

IT IS THE PIVOTAL IMPORTANCE OF THE AUTOMOTIVE INDUSTRY TO OUR ECONOMY AND THE SIGNIFICANT POTENTIAL OF THIS INDUSTRY THAT ARE THE FOUNDATION OF THIS REPORT.

BACKGROUND TO THE CURRENT CRISIS

The Canadian automotive industry has always been guided by national policies aimed at ensuring a fair share of domestic production and value added for Canada. At each stage in the evolution of the industry, any threat to Canada's fair share of automotive manufacturing relative to domestic consumption has been countered by domestic policies - whether tariffs, content schemes, or manufacturing requirements - that have sought automotive investment, production and employment in Canada.

The latest and most successful of these policies was the 1965 Automotive Products Trade Agreement (usually known as the Auto Pact) between Canada and the U.S. The Auto Pact created a conditional duty-free environment that allowed the Canadian and U.S. industries to rationalize according to appropriate economies of scale, resulting in efficient industries that serve an integrated Canada-U.S. market. A vital aspect of this agreement was that it recognized Canada's need for certain safeguards. These safeguards were in the form of certain production to sales ratios and Canadian value added commitments that had to be met before duty-free entry to Canada was granted.

The Auto Pact increased Canadian automotive employment both in absolute terms and as a share of total Canada-U.S. automotive employment. It allowed increased productivity to the point where the substantial gap that existed between Canadian and U.S. productivity in 1965 has been eliminated. The price gap between vehicles sold in the two countries has gradually narrowed, and today Canadian vehicle prices are in fact lower (before sales taxes) than those in the U.S.

The structure of the Auto Pact favoured assembly, and as a result, Canada has consistently had a surplus in vehicle trade with the U.S. However, auto parts production has not grown at a comparable pace, and the resultant deficit in auto parts has led, in most years since 1965, to an overall Canadian deficit in Auto Pact trade.

The world has changed dramatically since the introduction of the Auto Pact. International competition - between corporations and between countries hoping to establish, maintain, or strengthen their auto industries - is more intense than ever before. Industrial restructuring on a worldwide basis is occurring at an unprecedented level. Technological change is accelerating. The slowdown in economic growth and the depth of the current recession have reinforced these trends.

Imported vehicles now account for more than three cars in every ten sold in Canada. Because these foreign auto makers conduct little or no vehicle production or component sourcing in Canada, we are denied any benefit to our economy and workforce from this large segment of our market. Moreover, competitive pressures from Japan and elsewhere may force North American vehicle manufacturers to increase component sourcing from abroad, thereby increasing our already large parts deficit. And, should the long-awaited recovery develop in our economy, the positive effects on the Canadian automotive industry will be limited by the extent to which the level of vehicle imports continues to rise, reducing domestic job opportunities.

DESPITE THE STRENGTHS OF THE CANADIAN AUTOMOTIVE INDUSTRY, INSTITUTIONAL BARRIERS WILL LIMIT THE ABILITY OF OUR INDUSTRY TO COMPETE WITH OFFSHORE IMPORTS IN THE ABSENCE OF A REVISED TRADE POLICY ENVIRONMENT.

Canadian vehicle and parts companies have responded to the demands of the new competitive environment by making unprecedented investments in product design and development and in innovative manufacturing systems to improve productivity and quality. In each case, however, Canadian corporations face certain limitations that corporate action alone cannot overcome.

Auto-producing countries like Japan, which combine a modern, efficient industry with a standard of living that has not achieved North American levels, will continue to have lower labour costs. A yen that continues to be undervalued will provide Japanese multinationals with a competitive advantage that even improved productivity or output cannot overcome. Political pressure and public policy in other countries aimed at limiting imports and increasing exports could result in vehicles and parts being diverted to Canada and at the same time foreclose Canadian export opportunities abroad. The emergence of "new Japans" presents further threats on the horizon.

A NEW AUTOMOTIVE TRADE POLICY FRAMEWORK

Discussions of a policy framework for the Canadian automotive industry have traditionally focused on the issue of trade, and the role of trade policy is even more important today. The centrepiece of Canada's present automotive trade policy is the Auto Pact. But a trade policy based on the present application of the Auto Pact alone is inappropriate to current circumstances.

THE OBJECTIVE OF A NEW AUTOMOTIVE TRADE POLICY IS TO ENSURE THAT ANYONE SELLING MOTOR VEHICLES IN THE CANADIAN MARKET WILL MAKE A COMMENSURATE COMMITMENT TO PRODUCTION, INVESTMENT, PURCHASING AND JOBS IN CANADA.

The Task Force has recommended that the government adopt a new automotive trade policy framework, extending the principles of the Auto Pact so as to require all vehicle manufacturers selling in the Canadian market to make binding commitments - phased in over a reasonable period of time - **comparable to the commitments now being made by the vehicle manufacturers currently operating in Canada under the Auto Pact** (that is, vehicle production/sales ratios and 60% Canadian value added).

Once a comparability of commitment has been achieved by all vehicle manufacturers selling in Canada, the government of Canada should negotiate an agreement with all vehicle companies to increase the level of minimum commitments to the Canadian economy.

The trade policy framework also identifies the need for Canada to develop strategies and incentives to encourage the development and expansion of a world-competitive automotive parts industry in Canada.

As part of a broader Canadian automotive strategy, and in support of the trade policy framework, the Task Force has recommended a series of specific steps that government and industry participants can take. Implementing these recommendations would help to foster a sound labour-management climate, ensure a favourable investment climate through tax and tariff measures, nurture technological innovation, enhance human resource capabilities in the industry, ensure that necessary structural adjustments in the industry proceed smoothly and in a way that creates the fewest possible difficulties for workers and their communities and, finally, ensure ongoing consultation on and effective responses to automotive issues.

In formulating the trade policy framework, the Task Force has attempted to find a balance between free trade and protectionism. The direction we have pursued provides for duty-free entry of vehicles and components - if offshore manufacturers are in turn sensitive to the needs of Canada's economy. From an international perspective our proposal does not break new ground; rather, it follows the lead of other countries determined to develop and maintain modern and efficient automotive industries.

BENEFITS TO CANADA

We have, over the past few years, witnessed the human and financial costs of a weak economy. Future prosperity can only be built upon a strong manufacturing base. The automotive sector is a prime example of the kind of industry we must maintain and strengthen. Failure to act in this industry - given its importance and potential - challenges Canada's ability to develop and support other industries.

TASK FORCE ESTIMATES INDICATE THAT THE IMPLEMENTATION OF THE NEW AUTOMOTIVE TRADE POLICY WE RECOMMEND WILL MEAN A DIFFERENCE OF NEARLY 40,000 JOBS IN THE AUTOMOTIVE INDUSTRY AND AT LEAST ANOTHER 40,000 IN COMPANIES SUPPLYING THE AUTOMOTIVE INDUSTRY. THIS DOES NOT INCLUDE ANY SECONDARY SPIN-OFF EFFECTS, WHICH COULD HAVE AN EMPLOYMENT EFFECT EQUIVALENT TO AS MANY AS 50,000 JOBS. THUS THE DIFFERENECE BETWEEN MAINTAINING THE STATUS QUO AND IMPLEMENTING THE TRADE POLICY FRAMEWORK COULD MEAN 130,000 JOBS IN CANADA - ABOUT HALF OF WHICH COULD BE NEW EMPLOYMENT BOTH WITHIN THE AUTOMOTIVE INDUSTRY AND IN MANY OTHER SECTORS OF THE ECONOMY.

The members of the Task Force approached many of the questions we were asked to examine with different points of view. Through study and consultation we were able to reach consensus and present a unanimous recommendation on a new automotive trade policy framework. We would therefore urge the government to consider and adopt our recommendations within the shortest possible time. The health of Canada's automotive industry is vital to the future of our economy and thus deserves high priority on the government's agenda for the coming months.

The Recommendations

In writing our report, the Task Force was mindful of our mandate to make recommendations that would assist the government in "identifying priorities and formulating strategies to support industry initiatives". The recommendations presented here reflect the Task Force view of the priority that should be attached to resolving the various difficulties facing the industry and of the direction that government action to deal with them should take. Using our recommendations as a framework on which to elaborate detailed policies and strategies, the government will, we believe, be able to take concrete steps to support the continued development of a balanced and competitive motor vehicle and automotive parts manufacturing capability in Canada.

Central to our view of the priorities facing the industry and the direction that government action should take is Canada's automotive trade policy. The Task Force on the Canadian Motor Vehicle and Automotive Parts Industries recommends that the Government of Canada adopt the following automotive trade policy framework:

The Canada-United States Automotive Products Trade Agreement (APTA) established the fundamental policy that automotive companies that participate in the Canadian market invest, provide employment, and create value within that market commensurate with the benefit they derive from it. The signatories to the undertakings that accompanied the Agreement have pursued the terms, conditions and commitments relating to the APTA. However, participation in the Canadian market has changed since the APTA was legislated, and the intent of the APTA is no longer being upheld by all those selling in the market.

The Task Force therefore recommends that the Government of Canada pursue a trade policy that will require all vehicle manufacturers who sell vehicles in the Canadian market to make binding commitments comparable to the commitments now being made by the vehicle manufacturers operating under the APTA.

A step by step arrangement and an effective compliance procedure must be developed by the Canadian government that will ensure that these comparable commitments will be fulfilled by 1987.

For those vehicle companies already manufacturing in Canada under the APTA, the existing compliance procedure will remain in effect. However, once a comparability of commitment has been achieved by all vehicle manufacturers selling in Canada, then the Government of Canada should negotiate an agreement with all vehicle companies to increase the level of minimum commitments to the Canadian economy.

As part of this new trade policy, incentives should be established to encourage the further development and expansion of a world-competitive indigenous Canadian automotive parts industry.

Several additional measures are required as part of a broader automotive strategy and in support of the new trade policy.

With regard to the support that will be required to encourage the technological development and expansion of the Canadian automotive parts industry, the Task Force recommends:

- That the government introduce a technology licensing program in the automotive parts industry to provide the incentives necessary to expand the present level of activity significantly. (p.93)*

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* The rationale for the recommendations can be found in the text, beginning on the page indicated in parentheses.

- That the government provide incentives to encourage joint ventures that transfer foreign technological capabilities to Canadian automotive parts manufacturers. (p. 94)

- That incentives be created to encourage the development and expand the number of technical personnel in the independent Canadian parts industry. (p. 94)

- That government, with the cooperation of the industry, conduct a thorough and careful analysis of the opportunities for expanded automotive parts production in Canada and that particular products with strong potential for greater Canadian manufacturing be identified. (p. 100)

To provide a favourable tax and tariff climate for the industry the Task Force recommends:

- That the federal sales tax be levied on all vehicles sold in Canada on the basis of the purchase price paid by the dealer and that the change be implemented immediately under a special sales tax rule for vehicles. The matter of shifting the federal sales tax to the wholesale level for all taxable commodities should continue to be studied by the industry committee that has been set up for the purpose by the government. As part of this recommendation we suggest reduction of the general rate of tax to 8% from 9% because the tax would then be levied at the wholesale level on finished motor vehicles. (p. 124)

- That the preferential tariff rate extended to developing countries for their automotive products be limited to two-thirds of the Most Favoured Nation tariff rate for automotive goods. (p. 125)

So that automotive workers and the automotive vehicle and parts industries are able to weather the current period of structural adjustment successfully, the Task Force recommends:

- That the ILAP program be expanded and extended to the full automotive sector for a period of five years. (p. 126)

- That the labour benefits that were applicable in the community part of the ILAP program be provided under the extended and expanded ILAP program for the automotive sector and that they be expanded to encompass the full range of benefits that were provided under the TAB program during the Auto Pact transition years. (p. 127)

With respect to the human aspects of changing conditions in the industry, the Task Force recommends:

- That the human resource aspects of changing conditions in the automotive industry be given immediate and thorough study by governments, the industry and labour with a view to recommending responsive policies and programs that could be introduced and sustained over at least the next five years. (p. 128)

In connection with effective future consultation on the automotive industry, the Task Force recommends:

- That the Minister of ITC/DREE establish an Automotive Council to provide a forum for discussion, consultation and advice on automotive policy matters. (p. 129)

- That the Minister of ITC/DREE report annually on the state of the automotive industry in Canada. (p. 129)

- That an Office of Automotive Affairs be established at the Assistant Deputy Minister level within ITC/DREE.(p. 131)

CHAPTER 1

THE STRATEGIC IMPORTANCE OF THE CANADIAN AUTOMOTIVE INDUSTRY

The automotive industry is the linchpin of Canada's manufacturing base and the key industry linking that manufacturing base with the resource industries of the nation. As a major consumer of steel, iron, aluminum, copper, rubber, plastics, textiles, glass, chemicals, machinery and electrical products, the automotive industry is vital to the continued health of the Canadian economy. In fact, nearly one in every seven Canadian manufacturing jobs depends directly on the continued viability of the automotive industry.

Viewed by itself, the automotive industry is Canada's largest manufacturing sector, producing nearly $18 billion worth of goods in 1982. Cars, trucks, buses and components made in Canada account for more than 8% of the value of all goods shipped from the nation's factories. Preliminary statistics indicate that in 1982 the industry employed about 103,000 workers producing automotive goods, down 17% from the 124,000 employed at the peak during 1979, but still representing about 8% of all manufacturing employment in Canada. Because of reporting anomalies, these numbers understate the true level of manufacturing employment in the industry by many thousands.[1] Nor do they include

1. Many automotive plants are not counted in official statistics, which therefore underestimate actual levels of automotive output, employment and investment. See Appendix 2 for a note on statistics used in this report and the problems with official statistics.

the thousands of employees who work in the vehicle and parts distribution system or the approximately 70,000 workers employed by Canadian dealers selling and servicing North American-assembled cars and trucks.[2]

A little more than half of all workers in automotive manufacturing are employed in vehicle assembly, parts production and other work by the "Big Four" automakers - American Motors, Chrysler, Ford and General Motors - and several smaller vehicle manufacturers, including Volvo Canada, International Harvester, Mack, Paccar, and Western Star Trucks. The remainder of the manufacturing workforce is employed by the independent Canadian parts industry, which includes nearly 400 companies whose business is primarily automotive parts production and another 800 companies that do at least some parts manufacturing. In addition to these nearly 1,200 parts companies, there are thousands of other Canadian businesses supplying goods and services to the automotive sector.

Although its national economic significance is great, the industry's effect on local economies is even greater. Communities such as Windsor, St. Catharines, Oakville, Oshawa, St. Thomas and Chatham in Ontario and Ste Thérèse, Anjou and Waterville in Quebec depend on the automotive industry for more than half their manufacturing jobs, while vehicle and parts plants such as Volvo and Michelin in Nova Scotia and parts and assembly plants throughout Western Canada contribute to employment elsewhere in the country. The jobs in these communities cannot easily be replaced, as the current crisis in the automotive industry has demonstrated. Moreover, interprovincial trade flows in goods consumed by either the industry or its workers - oil and gas, lumber, minerals, agricultural products - show that the health of the automotive industry is significant to the whole country, not just to provinces like Quebec and Ontario where it provides a great deal of direct employment.

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2. Task Force estimates based on data from Federation of Automobile Dealer Associations of Canada and the Motor Vehicle Manufacturers Association of Canada.

The automotive industry is also a major contributor to Canada's export trade. Over the last ten years exports of vehicles and components constituted about 20% of Canada's total merchandise exports and nearly 60% of Canada's exports of manufactured end products..

A KEY LINKAGE INDUSTRY

We refer to the automotive sector as a key linkage industry because it depends on and provides an economic base for many other industries. It is the largest single purchaser of a number of processed raw materials and fabricated products and consumes substantial proportions of the output of many other industries. As shown in Table 1.1, the vehicle assembly and parts industry consumes over one-sixth of the nation's iron and steel production, rubber products and batteries. More than 14% of processed aluminum, 13% of processed copper, and 8% of all glass and paint go into the automotive industry.

In addition to purchasing large quantities of semi-finished products, the automotive industry is an important market for the fabricated product industries that underpin Canada's construction, resource equipment and consumer goods sectors. The industry takes 15% of all machine shop production, 13% of wire products, 13% of metal casting and extruding, 8% of metal stamping, 4.7% of plastics and 3.8% of textile production, thus providing a firm economic base for many other industries and companies.

The importance of the automotive industry to its suppliers is far greater than these simple output percentages would indicate. A permanent loss of 17% of the market for steel or rubber products, for example, would likely result in much more than a 17% decline in production. Facilities that are viable at present production levels might quickly become unprofitable if demand were to drop sharply. Closures would be inevitable, because in industries like steel and rubber, plant capacity can be added or dropped only in large increments.

Table 1.1

Dependence of Key Manufacturing Sectors on Shipments to The Automotive Industry - 1978

Industry	Total Employees in Canada - 1978	Percentage of Output Dependent On The Automotive Industry
Foundries	10,400	36.7
Battery Manufacturers	3,000	17.3
Iron and Steel	56,200	16.9
Rubber Products	28,900	16.9
Machine Shops	12,200	15.2
Aluminum Rolling and Extruding	7,000	14.2
Wire Products	18,800	13.1
Copper and Alloy Rolling	3,600	12.9
Metal Casting and Extruding	5,200	12.9
Metal Stamping	34,100	8.3
Glass Products	11,600	8.2
Miscellaneous Metal Fabricating	24,900	8.0
Paint Manufacturers	7,400	8.0
Radio and TV Receivers	2,300	5.9
Plastics and Synthetic Resins	5,478	4.7
Textile Industry	67,684	3.8
Plastic Fabricators	31,441	3.0

Source: Special Statistics Canada tabulations for the Task Force from the 1978 national input/output open model.

This is of particular concern with regard to Canada's iron and steel industry, the bulk of whose automotive-oriented production is purchased by Canadian parts manufacturers. Employing nearly 50,000 workers, the steel industry is one of the country's most modern and internationally competitive industries, and one of the few manufacturing industries that is largely Canadian-owned. Its continued viability is clearly of great importance to the nation and particularly to the mining communities in Ontario, Quebec and the Maritimes that depend on it. Moreover, without a healthy iron and steel industry, significant economic benefits from major resource and transportation projects in Western Canada would flow out of the country.

STRATEGIC SUPPORT FOR HIGH TECHNOLOGY

The automotive industry is also a key linkage industry in the sense that it can provide strategic support for emerging high technology industries through its research and development activities and its purchases of high technology goods and services. Moreover, the automotive industry continues to be an essential proving ground for advanced manufacturing technologies.

High technology products, particularly micro-electronic devices, are finding increasing application in automobiles and commercial vehicles. Electronic engine controls and on-board diagnostic computers are already a reality, and trip-planning and monitoring computers are not far behind. New materials made possible by technological advances, especially high-strength, light-weight metals, plastics and fibres, are helping the industry to respond to the demand for vehicles with greater durability and fuel efficiency. The oil crisis stimulated a search for alternative fuels and engines that can run on them. As a result, the industry is employing a variety of advanced technologies to address the problems of designing new engines, electrical systems and drive trains. In all these areas and more, the automotive industry is a developer and major consumer of high technology products and services.

The automotive industry is also a major developer and consumer of advanced manufacturing technology. The use of robots and programmable controllers is already widespread in parts manufacturing and vehicle assembly, while lasers and optical scanners are being applied to such uses as inspection, material sorting, and quality control. Ford's Essex Engine Plant, for example, is using etching lasers supplied by Diffracto of Windsor to mark engines with identification codes that can later be read by other lasers, thus making it possible to sort and trace different engines through the manufacturing process.

One of the greatest potential growth areas in the computer field is manufacturing applications, and the vehicle assembly and parts companies are at the forefront in introducing and testing these technologies. The major companies have already adopted computer-aided design, a field in which Canada has a fledgling industry, and are among the first to introduce computer-aided manufacturing on a widespread basis.

If Canada is to develop a presence in advanced manufacturing technologies, the automotive industry, given its size and nature, will clearly have to play a significant developmental role. In recognition of this need, the Ontario government has already announced the establishment of an auto parts technology centre in cooperation with the industry, and further steps will be needed. As is the case with the traditional resource and manufacturing industries, the automotive industry is in a position to contribute to the development of emerging high technology industries only so long as its own health permits it to provide a steady market for high technology products and services.

SUPPORT FOR SMALL BUSINESS

It would be easy to assume that because the major vehicle and parts companies are very large, they purchase most of their supplies from a small number of other large companies. Measured solely in terms of dollars, most of their purchases do come from large firms, but the major vehicle companies are also major buyers of parts and services from small firms. For example, General Motors of Canada bought goods and services in 1982 from approximately 7,500 Canadian companies, of which an estimated 75% were businesses with fewer than 100 employees. Ford has also estimated that 75% of its roughly 4,000 Canadian suppliers in 1982 were businesses employing fewer than 100. Similarly, Chrysler bought goods and services from about 1,500 Canadian companies in 1982, a high proportion of which were small businesses. While hundreds of these small firms were automotive parts manufacturers, many hundreds more were supplying other goods and services to the industry, ranging from maintenance to transport and from construction to office services.

A second source of small business employment in the automotive sector is the extensive network of dealers providing sales and service of North American-produced cars and trucks. There are approximately 2,600 such dealerships across Canada providing about 70,000 jobs. Taken together these small businesses are a significant source of jobs in the communities they serve.

AUTOMOTIVE PRODUCTIVITY AND NATIONAL WEALTH

The automotive industry, by virtue of its high productivity, has a strategic significance for Canada that is independent of its contribution to employment, the balance of trade, the well-being of individual communities or its role as a key linkage industry. In the broadest sense the automotive industry has strategic significance for Canada because it is more productive than most of Canada's manufacturing sector and thus is contributing to a rising standard of living for Canadians at a greater rate than most other industries.

Specifically, the automotive industry creates greater value per hour worked than most other manufacturing industries. It has a value added per employee ratio 21% higher than the average value added per employee in the manufacturing sector.[3] Moreover, the automotive industry has over the past twenty years increased its own productivity faster than most other manufacturing industries in Canada.

Between 1960 and 1973 the transportation equipment industry (over 75% of which is vehicle and parts manufacturing) increased its productivity by over 7% per year. During the 1960s this rate of increase was faster than that of any other manufacturing industry group and twice the rate of the manufacturing sector as a whole. From 1973 to 1977 the rate of productivity improvement dropped to 3.6%, but this was still 50% higher than the performance of the manufacturing sector as a whole.[4] Productivity growth has slowed since the onset of the recession, but in the last few years the automotive industry has introduced new manufacturing systems and invested heavily in new plant and equipment. In Chapter 5 we examine these systems and investments and the gains in productivity that can be expected to flow from them over the course of the 1980s.

Much of this increase in productivity was due to the rationalization of the industry subsequent to the Canada-U.S. Automotive Products Trade Agreement of 1965 which provided for conditional duty-free trade between the two countries. The strong performance of the Canadian automotive industry was also partly a result of starting from a lower productivity base than the U.S. industry at the time of the agreement. Nevertheless, a look at other countries that have an automotive sector shows that the automotive industry in each country has consistently maintained a rate of productivity growth greater than the average increase in productivity for all manufacturing in that country.

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3. Calculated from Statistics Canada data for manufacturing value added and employment in 1979 - the last year in which capacity utilization in the industry was not severely depressed

4. These figures are all for labour productivity and represent compound annual growth rates. See Uri Zohar, Canadian Manufacturing: A Study in Productivity and Technological Change, Volume II, 1982.

The automotive industry can continue to be an important contributor to Canadian prosperity, generating jobs and investment that raise the standard of living of all Canadians. Recent experience has demonstrated that Canada cannot rely solely upon resource mega-projects, the service sector, or high technology to generate all of the new jobs that will be needed in the coming years. In fact, as we have shown, many of Canada's resource, service,[5] and high technology industries depend upon the manufacturing sector for their well-being. A healthy Canadian economy in the 1980s will require a vigorous and healthy manufacturing sector.

Unfortunately, maintaining a strong manufacturing sector is more difficult than ever before. The international trade in manufactured goods is more intensely competitive than at any time since the beginning of the industrial age. Whether the product is steel or machine tools, copiers or televisions, aircraft or automobiles, international competition is fierce, and it is increasing. Nor will the industries of the future be immune. Computers, fibre optics, integrated circuits and advanced telecommunications systems are all coming under rapidly intensifying international competition.

In this environment, the strategic significance of the automotive industry extends far beyond what it means to the economy of Canada today. The competitive demands facing our automotive sector are basically the same as those facing Canada's entire industrial base. If we cannot mobilize our people and resources to maintain a healthy and productive automotive industry, it is unlikely that we will have the organizations and production systems necessary to succeed in new industries like advanced telecommunications, aerospace, software design and office systems.

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5. The automotive industry alone consumes almost 10% of all services to business management in Canada. (Based on special Statistics Canada tabulations for the Task Force from the 1978 national input/output open model.)

In summary, the automotive industry lies at the heart of Canada's industrial base. For this and the other reasons outlined in this chapter, Canada has long maintained a major commitment to the automotive sector. But Canadians cannot be expected to maintain an automotive industry that is uncompetitive or unresponsive to changing conditions and new technologies. In this regard, the Task Force has paid particular attention to its mandate to formulate recommendations that will contribute to "identifying priorities and formulating strategies and policies to support industry initiatives that will contribute to a balanced and competitive automotive manufacturing capability in Canada". The remainder of this report is our response to the challenge of identifying a strategy to ensure the continued and growing vitality of an industry whose health is central to Canada's economic future. We begin by tracing the evolution of the industry and describing the conditions that have governed its development to date.

CHAPTER 2

THE EVOLUTION OF THE CANADIAN AUTOMOTIVE INDUSTRY

The Canadian automotive industry has traditionally been guided by a national interest in ensuring that Canada receives a fair share of domestic production and value added given its level of consumption. At each stage in the evolution of the industry, any threat to Canada's share of automotive manufacturing has been countered by domestic policies that have sought automotive investment, production and employment in Canada.

Throughout the industry's history, the pattern has been predictable: circumstances threaten the industry in Canada, and the government introduces measures - whether tariffs, content schemes or manufacturing requirements - to preserve a healthy and competitive automotive industry. In Chapter 5 we demonstrate that in each case the industry has matched government action with its own steps, responding to the competitive challenge successfully and investing in new technology that allowed it to thrive.

This chapter traces the development of automotive policy and the industry in Canada from its beginnings through to the late 1970s. Before doing this, however, it would be useful to provide a sketch of the Canadian industry as it exists today.

THE INDUSTRY TODAY

The Canadian automotive industry comprises nine major producers of cars and trucks, four of which produce parts as well, and nearly 400 independent manufacturers of automotive parts. A substantial number of other independent companies - some 700-800 - sell at least a portion of their products to the vehicle manufacturers or to the automotive replacement market, but are not classified as parts manufacturers because less than half of their output is specifically automotive. Also a part of the Canadian industry is a coast to coast distribution system composed of approximately 2,600 dealers of North American-built vehicles and hundreds of distributors and jobbers of automotive parts.

The vehicle manufacturers produced 807,645 passenger cars and 468,807 trucks and buses in 1982, making Canada the seventh largest vehicle producer in the world. Vehicle assembly is centred largely in Ontario, with 83% of total production, while 12% takes place in Quebec; there are also smaller facilities in British Columbia, Manitoba and Nova Scotia. (See Appendix 3 for a list of vehicle plants and products.) Parts production is also concentrated in Ontario and Quebec, although plants are located in communities throughout Western Canada and in parts of the Atlantic region as well.

The Vehicle Producers

During 1982, 13.7% of North American car assembly and 19.7% of truck assembly calculated on a unit basis, occurred in Canada. (This compares with 10.5% of car and 17.5% of truck assembly in 1979.) The so-called "Big Four" vehicle producers - American Motors, Chrysler, Ford and General Motors - have accounted for about 70% of the total annual value of Canadian vehicle and parts production, which amounted to $17.7 billion in 1982. This includes 90% of the value of vehicle

production and 41% of the value of parts production. The other major producers - International Harvester, Mack, Paccar and Western Star Trucks - make trucks, while the ninth vehicle producer, Volvo Canada Ltd., assembles its 240 series car at its plant in Halifax.

The Parts Producers

The automotive parts industry consists of three kinds of producers - the in-house parts facilities of the vehicle companies, the independent Canadian-owned parts companies, and the foreign-owned independent parts manufacturers. Two general categories of parts are manufactured - original equipment parts for inclusion in new vehicles (which account for about 70% of the value of parts shipments) and aftermarket parts for sale to the automotive replacement market. Parts produced in Canada range from large sub-assemblies like engines and transmissions to simpler components like mirrors, seat belts, mufflers and many others.

Parts manufacturers shipped goods worth almost $5 billion in 1981, 41% of which were produced by the in-house facilities of vehicle manufacturers, 21% by the 12 largest foreign-owned parts companies, and 27% by the other foreign-owned firms. Eleven per cent of total output, or $537 million in shipments, was accounted for by independent Canadian-owned companies.[1] Although two Canadian-owned firms are among the ten largest parts companies, most of the Canadian firms are medium to small in size.

Of the roughly $11 billion worth of parts consumed annually in Canada, about $1.5 billion worth comes from producers located in Canada. Hence the bulk of Canada's $5 billion in automotive parts production

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1. The value and origin of output from the 700-800 parts companies that are not included in official statistics (See Appendix 2) has not been estimated, but given that most of these companies are probably Canadian-owned, the actual percentage of output accounted for by Canadian firms might be higher than 11%.

is exported, principally to the United States. A more detailed profile of the automotive parts industry can be found in Appendix 4.

The structure of the automotive industry that exists today is the product of many factors, including the competitive requirements of the vehicle and parts producers, Canada's proximity to the world's largest automotive market, the high level of foreign ownership in the industry, and government policy. The evolution of the industry should be viewed in light of the opportunities and constraints that these factors have presented. In the balance of this chapter we show how Canada has attempted to minimize the constraints and capitalize on the opportunities in the North American automotive industry.

THE PRE-AUTO PACT ERA

Canada's automotive industry has been shaped by its proximity to the United States, which provided the early automotive technology and production methods, and by the domination of the industry by the affiliates of the U.S. pioneers - Ford, Buick, Chevrolet and Chrysler. They were encouraged to locate plants here by tariffs that were as high as 35% until the mid-1920s. Although plants were located in Canada, engines and other key components were imported from the larger, more efficient plants in the U.S. Thus the structure that evolved precluded the formation of a self-sufficient Canadian industry. In this environment, the dilemma facing government policy makers was how to encourage the automotive industry to invest here, with all the economic benefits that would bring, without promoting the development of an inefficient branch plant industry structure. As we show in Chapter 7, these considerations still apply, and they guided our deliberations on how government involvement, through an appropriate trade policy, should contribute to the continuing development of the Canadian automotive industry.

Between 1918 and 1923, Canada was the world's second largest producer of motor vehicles. As early as 1926, however, there was concern that high tariffs were keeping consumer prices higher in Canada than in the United States. Tariffs were reduced somewhat that year as the industry began the first of four attempts to reduce duty on imported components, provided the importing manufacturer achieved a specified level of Canadian value added.[2]

Tariffs were raised again in the early 1930s in an effort to bolster production and employment in the midst of a depression. Prohibitions were placed on imported used automobiles, and duty-free access was extended to British-made vehicles, although the prospect of British imports was slight at the time. At the same time, tariff barriers were being raised elsewhere in the automotive world, particularly in Europe.

A Tariff Board inquiry during 1935 and 1936 noted that there were some claims that retail auto prices were 35% higher in Canada than in the U.S. This led many to question whether the benefits to Canada - in terms of jobs and economic activity - were worth the cost, as represented by higher prices, of trying to nurture a domestic industry. The Board concluded, however, that the wages and economic activity generated by the auto industry were three times the additional amount consumers were spending for cars. "It is 'good business' for Canada", the Board stated, " to encourage maintenance and expansion of the Canadian automotive industry." The Board proposed a revised duty and Canadian content scheme that lasted until the early 1960s, when a surge of British and other European imports combined with a

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2. Throughout this report we use the definition of Canadian value added referred to in the Auto Pact letters of undertaking from the major vehicle companies. Under this definition Canadian value added is essentially the portion of labour and materials costs and in the case of the independent parts companies, profits that originates in Canada and is consumed in the course of vehicle or parts production. A component manufactured in Canada using all Canadian materials and labour has a 100% level of Canadian value added.

decline in domestic production and employment to produce a serious deficit in automobile trade. The auto trade deficit of 1960 accounted for $500 million of the nation's total current account deficit of $1.2 billion.

A one-man royal commission, conducted by Dr. Vincent Bladen, recommended in 1961 that a new middle course should be steered between unrestricted free trade and higher tariff protection. "My concern," wrote Bladen, "is to reconcile the interest of the consumer in low prices, that of the automotive producers in profits and employment, and that of the producers of primary products in export markets." He proposed a revised set of tariffs, excise tax changes, and duty-free access for vehicles and components, both original and replacement, brought in by manufacturers achieving a specified level of Canadian content. The level of Canadian content was to depend on the manufacturer's sales volume. Bladen calculated that the proposals would result in both increased production and lower prices for consumers. However, the government did not act immediately on the main body of his recommendations.

A way had yet to be found of implementing Bladen's suggestions and creating the conditions under which an efficient domestic industry could develop and flourish instead of simply protecting it with higher tariffs or other trade barriers. A new approach was needed - one that would promote the development of the manufacturing sector without continuing the upward pressure on prices that the tariff-based approach implied.

The first step toward putting the high-tariff era behind us occurred in 1963, when Canada adopted a broad scheme for remitting the duty owed on imported vehicles and parts in proportion to the value of a company's exports of vehicles and parts. U.S. parts makers objected to the plan, and one petitioned for a countervailing duty on imported parts on the grounds that the duty remission amounted to a "bounty or grant" under the terms of the U.S. Customs Act of 1930.

Before the Bureau of Customs could conclude its review, Canada and the United States negotiated the Automotive Products Trade Agreement. This 1965 agreement, which has come to be known as the Auto Pact, represented a creative departure from past approaches, and it reshaped the entire North American automotive industry. Only the independent Canadian automotive parts manufacturers had serious reservations about the agreement, fearing that Canadian value added (CVA) would not be maintained at "fair share" levels as the result of undefined CVA commitments in the agreement. These concerns were expressed to the Canadian government on a number of occasions, but in the end were apparently considered non-negotiable.

THE AUTO PACT

The Canada-U.S. Automotive Products Trade Agreement (APTA) served to rationalize the structure of Canadian and U.S. operations into an integrated North American automotive industry. It provided for free trade in new vehicles and original equipment parts under certain conditions agreed to by the signatories. The first two conditions were that vehicles and parts eligible to enter the U.S. free of duty must come from Canada and that they must contain at least 50% North American content. In addition, all parties recognized the special conditions applying in Canada and agreed to the following three conditions:

1. Only companies making cars or trucks in Canada may be designated to participate under the Pact.

2. Each designated manufacturer must maintain a certain ratio between the net sales value of vehicles made in Canada and the net sales value of vehicles sold here. The ratio for each class of vehicle - car, truck or bus - is to be either 75% or the level achieved in the base year beginning August 1, 1963, whichever is greater. In practice, these ratios are 95-100% for cars and 75 to over 100% commercial vehicles. (See Table 2.2.)

3. The amount of Canadian value added for all classes of vehicles made in Canada is to be at least as great as the amount that was achieved in the base year.

Two further conditions with regard to Canadian value added over and above the base year requirement were set out in letters of undertaking signed by the vehicle makers wishing to participate in the Auto Pact. These were intended to produce an early increase in the level of Canadian value added and provide for continuing increases in line with the growth of the Canadian market and the rate of price increases. They were as follows:

4. In each model year, the value added in Canada should amount to at least 60% of the growth in the value of cars sold in Canada over the value of cars sold in the base year; for commercial vehicles (e.g., trucks), the value added should amount to at least 50% of the growth in the value of commercial vehicles sold over the value of commercial vehicles sold in the base year.

5. Designated vehicle manufacturers were collectively to increase the amount of value added in Canada between 1965 and 1968 by a further $260 million.

The United States sought and obtained a waiver from GATT to implement the Auto Pact on a preferential basis for Canada, while Canada implemented the agreement on a multilateral basis.

The APTA thus offered an innovative approach to overcoming the dilemma that earlier efforts had failed to resolve. The safeguards would guarantee additional manufacturing activity in Canada, but the agreement accomplished this through means that would not place upward pressure on prices. In fact, as we will show later, the opposite has occurred as prices in Canada have fallen below those in the United States.

The Auto Pact has provided a relatively stable industrial climate, but implementation has not been without its problems. Although the United States initially agreed to the inclusion of the Canadian safeguards governing production and Canadian value added, it argued that the safeguards should be dropped after an initial transition period. Canada did not agree, believing that the safeguards were necessary to overcome "institutional impediments" resulting from relative market size, American ownership of the bulk of the Canadian industry, and the superior size and financial strength of the U.S. companies. In fact, the Automotive Parts Manufacturers' Association (APMA), the United Auto Workers (UAW), the government of Ontario and others have repeatedly argued that the safeguard provisions of the Pact are inadequate.

Complaints about the operation of the Auto Pact have led on occasion to bilateral discussions. In the late 1960s and early 1970s, Canada came under pressure to remove the safeguards in the Pact. The U.S. Senate Finance Committee held hearings on the Pact, and this led to increased congressional pressure to move toward termination of the Canadian safeguards.

By the latter half of the 1970s, however, the locus of greatest irritation had shifted to Canada, mainly as a result of complaints from the UAW and the APMA. Two task forces sponsored by the Department of Industry, Trade and Commerce examined the automotive industry in 1977 and 1978, although the Auto Pact was not included in the terms of the investigations. In 1978, Simon Reisman, one of the Canadian architects of the Auto Pact, led an inquiry into its performance. He concluded that it was not a good time to renegotiate the Pact, but that it should be reviewed annually because of the prospect of fundamental changes within the industry. Reisman recommended that vehicle makers get double credit toward their Canadian value added calculation for conducting research and development in Canada. To broaden the market for Canadian-made parts, he recommended that overseas vehicle makers be granted duty-free entry to Canada, provided that they made

or bought a sufficient portion of their components in Canada. Along with this and Reisman's other recommendations came a warning: the incentive for increasing automotive production and employment in Canada would be impeded, he said, if reduced tariffs on vehicles and most parts resulted from the Tokyo round of GATT talks. Such reductions were in fact negotiated, and duties are scheduled to decline to 9.2% for the bulk of automotive trade by 1987, down from 17.5% in 1965 and 15% at the time of the Tokyo round.

Although the government implemented only some of Reisman's recommendations, the Auto Pact was the subject of a 1980 election promise by Prime Minister Trudeau, who pledged that his government would open consultations with the United States. Consultations did take place, but in a period of market decline and rising imports, and they were eventually discontinued before any conclusion had been reached.

The Auto Pact has been the dominant force guiding the vehicle manufacturers in Canada, but other types of trade arrangements have been made outside the Pact. One of these other arrangements was a duty remission scheme negotiated between the federal government and Volkswagenwerk AG of West Germany in 1981. The agreement provided that, beginning in 1984 with the opening of a parts manufacturing plant in Barrie, Ontario, Volkswagen cars would be permitted to enter Canada free of duty. Specifically, the company agreed to buy and make in Canada parts with a value equivalent to 64% of the value of its duty-free vehicle imports, a Canadian value added level that is scheduled to rise to 85% by 1987. Once operative, the arrangement is expected to produce 500 new jobs at the Volkswagen plant and a futher 1,000 in suppliers' plants.

INDUSTRY PERFORMANCE UNDER THE AUTO PACT

It is generally agreed that the Auto Pact, despite any shortcomings, has brought positive results for both Canada and the United States. It has enabled the U.S. automotive companies to maintain the dominant share of the world's seventh largest vehicle market. For its part, Canada has gained substantially more production, expanded trade, increased productivity, a greater share of North American automotive employment, and lower consumer prices. Whether improvements in the arrangement could be made, particularly in light of changed nature of the automotive world, is a question to which we return later in this report.

Benefits to Canada

The benefits to Canada flowing from the Auto Pact can be summarized as follows:

1. Employment: The number of jobs in the Canadian automotive industry (excluding dealerships and ancillary employment) rose from 70,600 in 1964 to a peak of 124,000 in 1979. The total has since fallen off to 103,000 in the wake of the recession. But Canada's share of North American automotive employment in the Big Four vehicle companies actually rose from about 6.6% in 1973 to an all-time high of 8.8% by 1981.

2. Production: The Reisman report stated that, prior to the Auto Pact, Canadian value added by the Big Four vehicle companies amounted to 3.7% of the value of North American automotive output. By 1971, CVA had grown to 5.2% of the value of North American output. Since that time, CVA growth has varied depending on specific product sourcing and the

relative health of vehicle sales in each of the two markets. By 1981, CVA amounted to 6.9% of the value of North American output. (See Table 2.1.)

3. Productivity: Output per employee in the Canadian automotive industry was estimated at less than 65% of that in the U.S. industry prior to the Auto Pact. Several studies have concluded that this productivity gap has been virtually eliminated and that in some cases the U.S. rate has been surpassed. In addition, Canadian plants are rated equal to or better than their U.S. counterparts in terms of quality of production.

4. Prices: The average factory list price for cars (excluding federal and provincial sales taxes and adjusting for the exchange rate) in 1965 was estimated to be 9% higher in Canada than in the United States. By 1968, this gap had closed to 6% and in the 1970s Canadian prices, excluding taxes, actually fell below U.S. levels. In 1982, the factory cost to Canadian buyers was 8.8% lower for a two-door subcompact sedan and 6.9% lower for a full-sized sedan than the factory cost in the U.S.[3] Canadian consumers were generall unaware of this favourable cost differential as it is offset in the purchase price by a higher incidence of sales tax. For example, in Michigan sales tax adds only 4% to the retail sales price of a typically equipped intermediate-sized sedan, while in Ontario provincial sales tax adds about 7% to the retail sales price of the same car in addition to the 9% federal sales tax on the manufacturers' wholesale price.

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3. See the Annual Reports of the President to the Congress on the Operation of the Automotive Products Trade Act of 1965.

Table 2.1

Canadian Value Added in Automotive Production

By the Big Four as a Percentage of

Total North American Vehicle Production

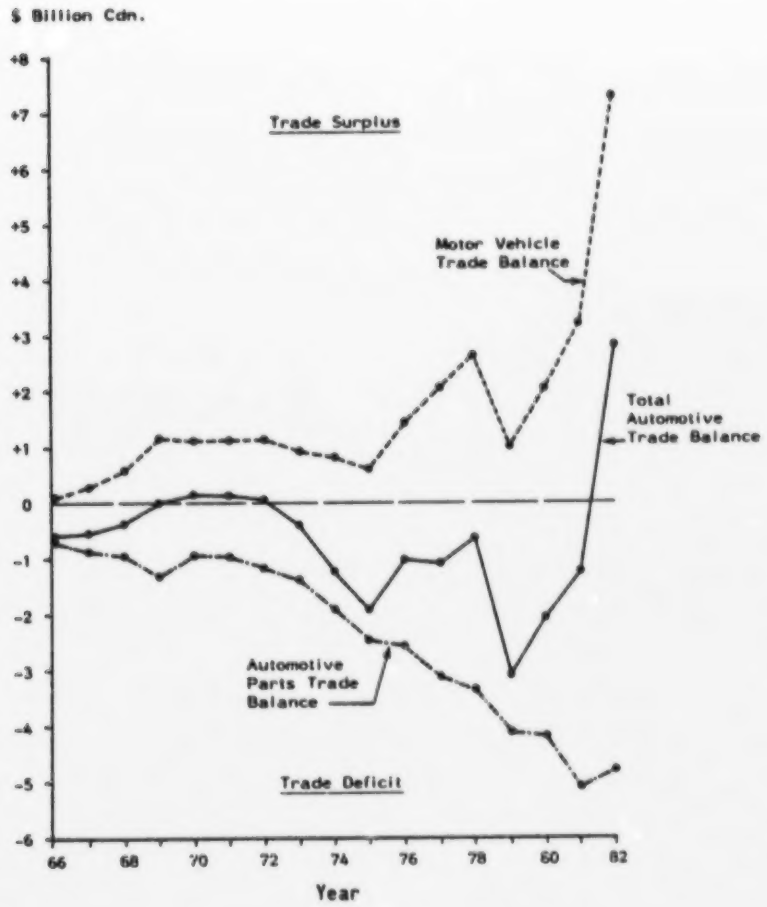
Year	Canadian Value Added as a Percentage of North American Vehicle Production
1964	3.7%
1965	3.4%
1966	4.2%
1967	4.6%
1968	4.4%
1969	5.1%
1970	6.7%
1971	5.2%
1972	5.5%
1973	5.5%
1974	6.6%
1975	6.4%
1976	6.0%
1977	5.5%
1978	5.2%
1979	5.7%
1980	6.3%
1981	6.9%

Note: Canadian value added is model year data for the 12 months beginning on August 1st of the year previous, while values for motor vehicle production are calendar year data for the 12 months beginning on January 1 of the years noted.

Source: Compiled from company responses to the Reisman Inquiry and company Auto Pact reports for 1979-1981 model years.

5. Trade: The total value of two-way trade in automotive products between Canada and the U.S. has grown from $1.2 billion in 1965 to $30 billion in 1982. In most cases since 1965, Canada has experienced overall automotive products deficits under the APTA (see Figure 2.1), although unusual market conditions produced a $2.9 billion surplus in 1982 with another surplus expected for 1983. (January/February results were a surplus of $500 million.)

Figure 2.1
Canada - U.S. Automotive Trade Balance



Source: Statistics Canada.

Canada's performance in Auto Pact trade with the United States has been the product of several factors, including the mix of cars built in Canada and the relative strength of retail sales in the two countries. Over the period, however, Canada's general automotive trade imbalance of $8.1 billion has resulted primarily from a large deficit in automotive parts trade. Canada has maintained a surplus in vehicle trade but, with the exception of the 1970-72 period and 1982, this surplus in vehicles has not been large enough to offset the growing deficit in automotive parts, which has reached about $5 billion each of the last two years.

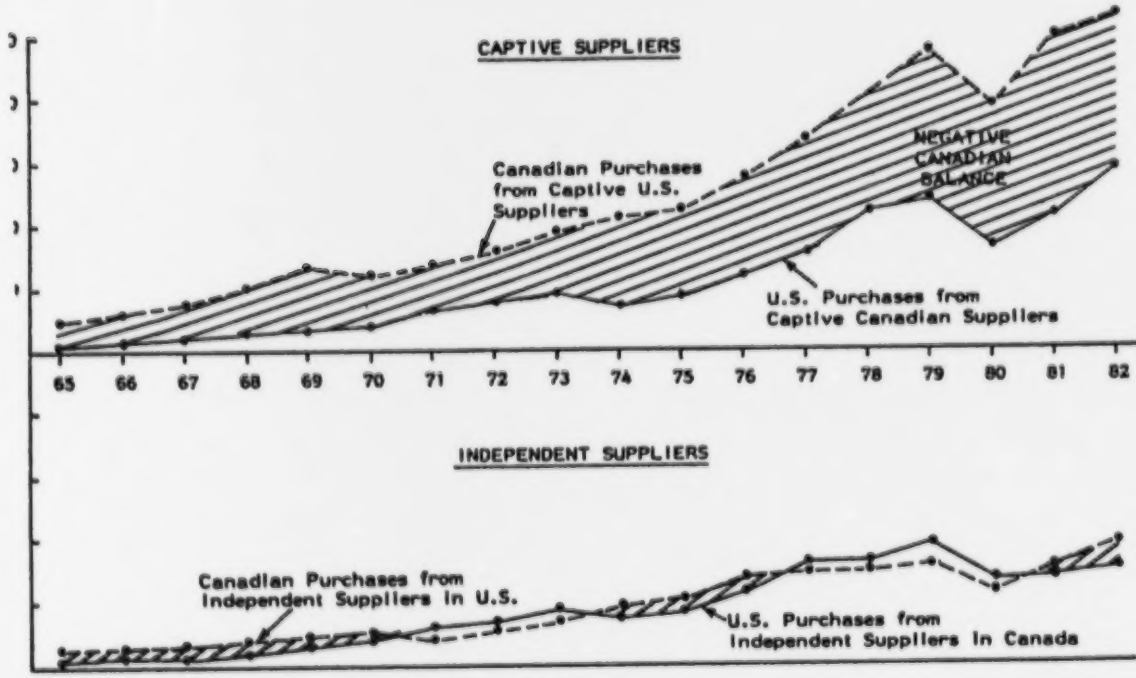
Canada-U.S. Auto Pact trade in parts produced by independent manufacturers has actually remained roughly in balance since 1970. (See Figure 2.2.) The main cause of the imbalance in Auto Pact parts trade lies in the captive parts areas. It results from the emphasis in the Auto Pact on production/sales ratios - which favour assembly over captive parts production. Because of these ratios, the Big Four vehicle companies have tended to expand vehicle production in Canada at a greater rate than captive parts production. This expanded vehicle production has required ever greater levels of imports of captive parts.

Canada's cumulative trade deficit with the U.S. under the Auto Pact of $8.1 billion is offset in part by a surplus of $5.6 billion in Canada-overseas trade within the Pact. Thus, Canada's total deficit in trade with all countries under the Pact since 1966 is $2.5 billion. Canada's cumulative trade balance since 1966 outside the Auto Pact has been much less favourable. The deficit in Canada-U.S. trade outside the Pact is $4.8 billion, while the deficit in Canada-overseas trade is more than twice that, at $9.5 billion. Thus, Canada has suffered a total deficit of $14.3 billion in trade outside the Auto Pact since 1966.

It is significant to note that almost all of Canada's automotive trade outside the Auto Pact is now one-way trade in the form of Japanese and European imports. During 1982, Japanese vehicle makers held a quarter of the Canadian market, and their shipments to Canada of vehicles and parts were worth $1.5 billion. Yet exports of Canadian vehicles and parts to Japan totalled only $10.9 million in 1982, which represents less than 1% of the $1.5 billion in Japanese automotive exports to Canada. The value of Canadian automotive products exported to the EEC has been substantially higher than exports to Japan; over the past five years they have been equal to only 10-16% of Canadian imports of European automotive products.[4] The fact is that, outside of the Auto Pact, Canadian automotive trade is not a two-way street.

Figure 2.2

NATURE OF CANADA - U.S. PARTS DEFICIT



Source: Company responses to Reisman Inquiry (1965-1977); Auto Pact Reports (1979-1982); 1978 data not available from Auto Pact Reports.

4. See Statistics Canada automotive trade data and U.N. International Trade Databank.

No discussion of the Auto Pact would be complete without noting the characteristics of the Canadian industry that have remained unaffected by it. The pattern of ownership in both the vehicle and parts segments of the industry has not changed significantly over the past 18 years. Nor has the share of research and development taking place in the Canadian subsidiaries of the foreign-owned vehicle and parts companies been affected. The major vehicle companies still spend less than 0.5% of their total research and development budgets in Canada.

The Canadian Safeguards

With few exceptions, the vehicle makers have met their Canadian production to sales ratio requirements and value added commitments. As shown in Table 2.2, vehicle production commitments have generally been exceeded, often by substantial amounts. However, the margin by which Canadian value added commitments have been exceeded has narrowed since 1971, with the exception of the 1982 model year. (See Figure 2.3.) A strengthening of U.S. demand for the particular models assembled in Canada - at a time when demand for all models is depressed in Canada - has resulted in a substantial surplus in Canada's automotive trade balance. The level of CVA as a percentage of the cost of sales in Canada has naturally risen in tandem.

Table 2.2

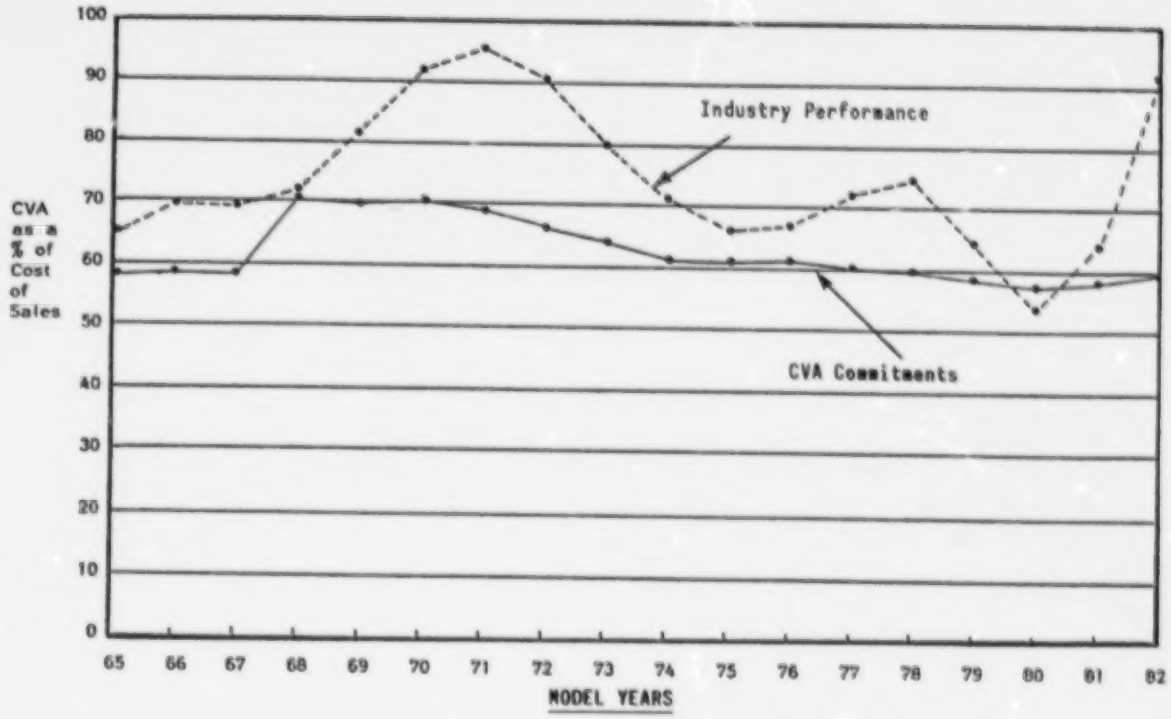
Overall Net Production to Net Sales Value Ratios* Achieved By Auto Pact Companies in Canada 1970–1982

(Canadian $ millions)

	MODEL YEARS												
	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
PASSENGER VEHICLES													
(Required ratio: range 95–100)													
Net Sales Value Ratio Achieved (All companies)	166	149	125	121	122	122	122	125	130	130	106	123	202
COMMERCIAL VEHICLES													
(Required ratio: range 75–100+)													
Net Sales Value Ratio Achieved (All companies)	162	142	122	115	98	101	113	132	155	127	115	140	238
BUSES													
(Required ratio: range 85–100)													
Net Sales Value Ratio Achieved (All companies)	111	120	119	97	102	114	98	105	163	183	199	273	213

* Net production to net sales value ratio is the ratio of the total value of Canadian vehicle production to the total net sales value of vehicle sales for all Auto Pact companies.

Figure 2.3
INDUSTRY CVA PERFORMANCE



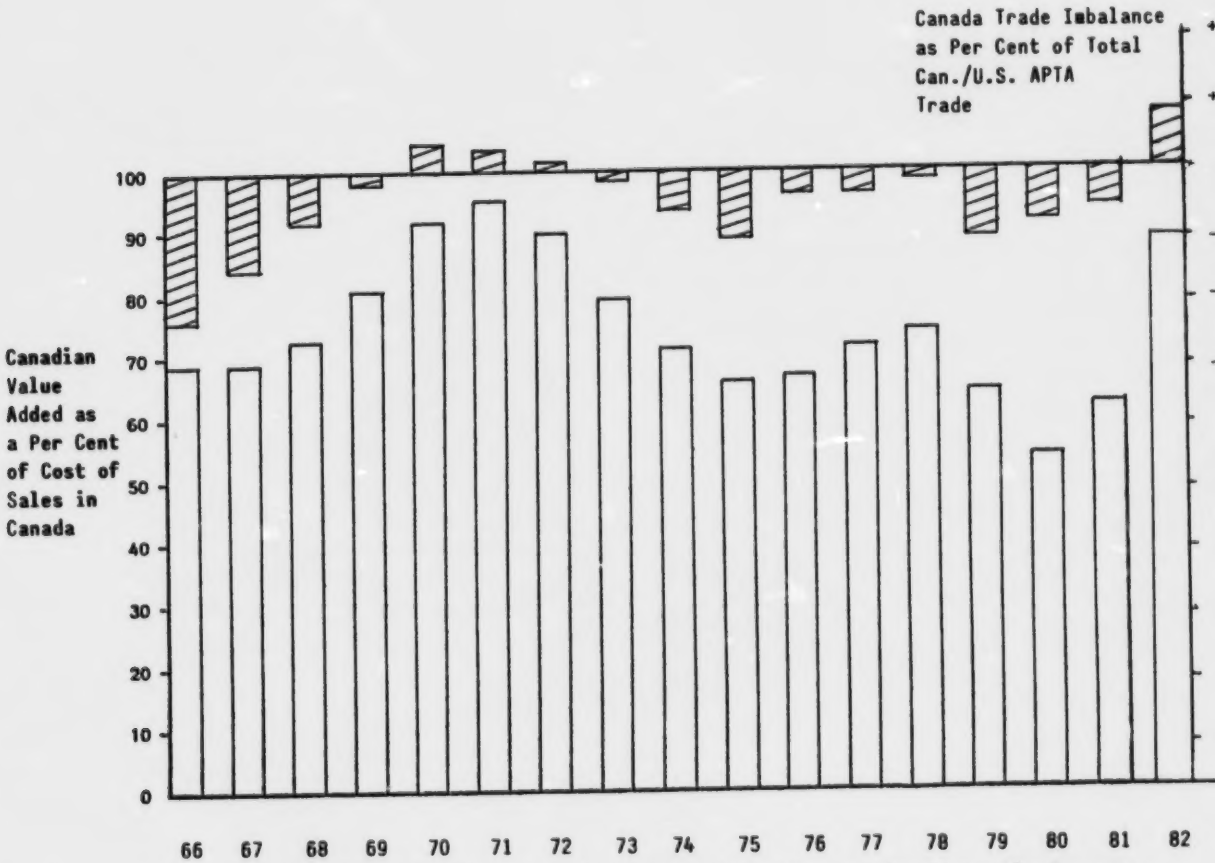
Source: Auto Pact Company Reports to ITC/DREE. See Appendix 5, Table A-8.

During the life of the Auto Pact, CVA has risen in relation to the total value of North American vehicle production. Consistent with the commitments made by the Auto Pact vehicle producers, it has kept pace with the growth of the Canadian market. There is a direct connection between CVA and Canada's trade imbalance with the U.S., a relationship that is illustrated in Figure 2.4. In his report on the Auto Pact, Simon Reisman estimated that CVA would have to be about 87% of the cost of sales to keep automotive trade with the U.S. in balance. However, given changing conditions, the level of CVA required to keep Canadian trade with the U.S. in balance would probably be different today.

Figure 2.4

RELATION OF CANADA'S TRADE BALANCE

AND INDUSTRY VALUE ADDED PERFORMANCE, 1966-1982



Note: CVA data are on a model year basis; trade balance data are based on calendar years.
Source: Auto Pact Company Reports to ITC/DREE. See Appendix 5, Table A-14.

GOVERNMENT PROGRAM SUPPORT

Consistent with the government's policy objective of ensuring that there is a healthy and competitive automotive industry in Canada have been its funding programs. Special federal programs were introduced at the time of the Auto Pact to help the domestic parts industry make

the transition from short production run, branch plant operations to fully rationalized and competitive components of the North American automotive industry. A total of $83 million in low interest loans were disbursed under these programs until their termination in 1973.

Since then, the automotive industry has been assisted by a variety of general government programs to encourage new and additional investment in the industry, to expand research and development, and to strengthen international marketing. Under these programs the federal government, through the Department of Industry, Trade and Commerce, has disbursed approximately $105 million in direct grants and loans. Of this amount, $40 million went to Ford Motor Company of Canada to secure the construction of a $700 million engine plant in Windsor. (Various state governments in the U.S. were offering generous financial incentives to induce Ford to expand existing engine facilities in those states.) Another $30 million of this amount went to Deutz diesel in Quebec for an extensive diesel engine research and development program. Of the remaining $35 million, approximately 50% has gone to Candian-owned companies.

Since 1981 companies and unemployed workers in the automotive industry have also benefited from the Industry and Labour Adjustment Program (ILAP). This program was set up specifically to help communities severely affected by the current recession but, given the crisis in the automotive industry, was extended in 1982 to cover all automotive parts companies in Canada and not just those in the original designated communities. Under ILAP, approximately $35 million in assistance for independent parts manufacturers has been approved to date. Of this amount about 70% has been approved for Canadian-owned companies.

All told, the federal government through ITC/DREE has provided about $223 million in various kinds of assistance to the industry since 1965. In addition, assistance of approximately $25 million was

provided through the Department of Regional Economic Expansion between 1969 and 1982. (This assistance largely involved projects undertaken by smaller specialty vehicle producers and certain aftermarket parts producers.) In the past three years, however, Chrysler, Ford, and General Motors alone have invested over $3 billion in new plant and tooling in Canada. While the government funding has been important, it is small in comparison to the financial commitment that all automotive companies have made.

Of the $223 million in government assistance more than half was provided or approved in the period 1979-1982. This reflects the severe financial demands placed on the Canadian automotive industry in the last four years. In the following chapter we explore the nature of the financial and other problems facing the industry as a result of the current market slump and the increasing levels of imports.

CHAPTER 3

THE CURRENT CRISIS

The Canadian automotive industry has moved into a state of general economic crisis during the last four years. The rising fuel prices that followed the second oil price shock in 1979 and the current North American recession have severely depressed new car and truck sales in both Canada and the United States. Sales of all vehicles in Canada fell from 1,370,000 in 1978 to 920,000 units in 1982, a decline of 33%. Overall, North American vehicle sales plummetted from 16.79 million units in 1978 to 11.15 million units in 1982, a drop of 34%. (See Table 3.1.)

Table 3.1
The Sales Downturn in the North American Vehicle Market, 1978–1982
(thousands of units)

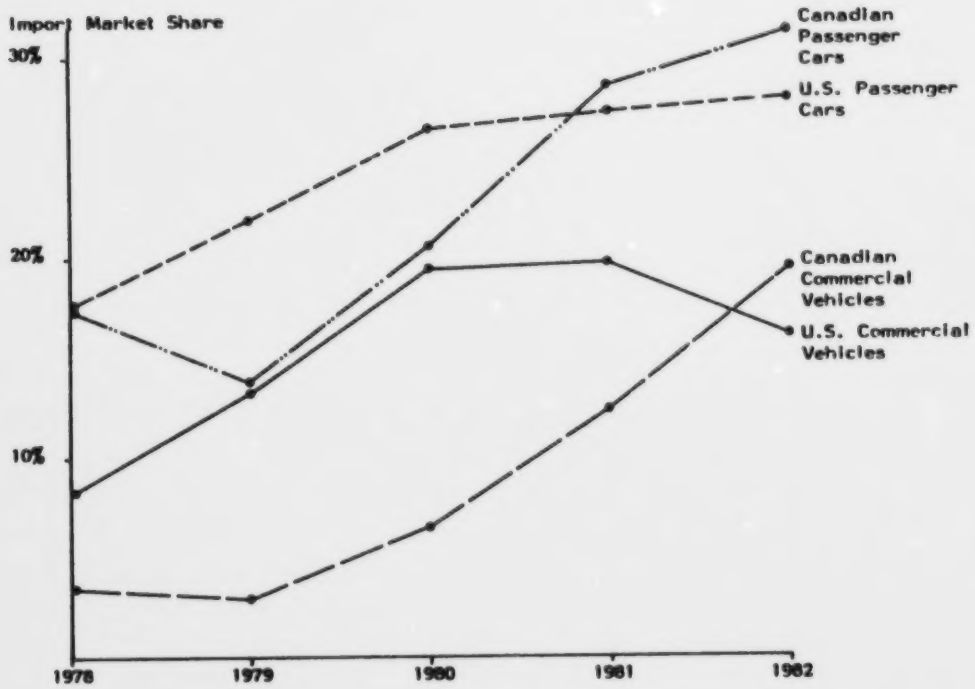
	1978	1979	1980	1981	1982	Percentage Decline 1978–1982
Canadian Car Sales	990	1,000	930	900	710	28%
Canadian Commercial Vehicle Sales	380	390	330	290	210	45%
U.S. Car Sales	11,310	10,670	8,980	8,540	7,980	29%
U.S. Commercial Vehicle Sales	4,110	3,480	2,490	2,260	2,250	45%
Total North American Vehicle Sales	16,790	15,540	12,730	11,990	11,150	34%

Source: Statistics Canada and U.S. Motor Vehicle Manufacturers Association.

At the same time, overseas vehicle imports have captured a sharply higher share of this shrinking market, turning the crisis into a struggle for survival for North American vehicle assemblers and their suppliers. Imports to Canada of European and Japanese cars grew from 17.5% of the market in 1978 to 31.3% in 1982. Offshore imports of commercial vehicles increased from 3.5% of the Canadian market to a substantial 19.5% share over the same period. Although similar levels of import penetration were reached earlier in the United States, the situation is now more serious in Canada than in the U.S. market. (See Figure 3.1.)

Figure 3.1

Overseas Import* Market Share in Cars and Commercial Vehicles in Canada and the U.S., 1978-1982



* Overseas imports" refers to vehicles brought into Canada or the U.S. from outside North America.

Source: MVMA Canada and U.S. Department of Commerce.

This surge in imports has been caused by a variety of factors, which we describe in greater detail in Chapter 4. It occurred partly because of a sharp shift in demand toward the smaller cars that make up most of the Japanese and European product lines, and partly because of changes in consumer preferences. Playing a less visible but equally important role has been the devaluation of the Japanese currency. In addition, Japanese tax policies and their application have also become a significant consideration.

The surge in overseas imports to both Canada and the United States has largely taken the form of increased North American sales of Japanese cars and trucks. In both markets, export restraint arrangements have been introduced. A voluntary restraint arrangement on passenger car exports was negotiated between Canada and Japan in 1981 but has been ineffective because of a severe decline in overall vehicle sales. The Japanese share of the market grew by almost two percentage points in 1982, despite the agreement. In the U.S. market, the import share of new passenger car sales levelled off in 1981 after voluntary export restraint by Japan. Import penetration of the U.S. commercial vehicle market also levelled off in 1981, and actually declined in 1982, after the imposition of a 25% tariff on light pick-up trucks in August 1980[1] and the introduction of new, North American-produced compact pick-up trucks by Ford and General Motors which replaced imported pick-ups in their product lines. The U.S. has negotiated an extension of Japan's voluntary restraint agreement until March 31, 1984. In Canada, Japan's latest voluntary restraint arrangement expires June 30, 1983, and discussions are now under way to extend it.

The crisis facing the industry as a result of the sharp decline in sales and the injury caused by the rapid growth in imports has

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1. The tariff classification for mini pick-up trucks was changed by the U.S. Customs Service subsequent to a court ruling on a similar classification practice. This action had the effect of raising the duty from 4% to 25%.

imposed severe hardships on communities, workers and companies throughout the country. In this chapter, we describe the dimensions of the crisis in terms of the industry restructuring it has caused and the human and financial costs it has imposed.

THE RESTRUCTURING OF THE NORTH AMERICAN INDUSTRY

The substantial decline in the sales of North American-built vehicles has forced a major restructuring of the entire North American automotive industry. Each of the major vehicle manufacturers has been forced to consolidate capacity and close plants in many communities. Between 1980 and 1982 alone, General Motors, Ford and Chrysler shut down more than 30 major plants in the United States and Canada.[2] In addition, more than two dozen independent parts suppliers in Canada permanently closed their doors,[3] as did many others in the United States. Many of the vehicle and parts plants that have remained open have been operating well below capacity. Overall capacity utilization at North American assembly plants was only slightly above 60% in 1981 - much lower than in all other major automotive regions of the world. (See Table 3.2.)

2. "Major plants" refers to plants employing 500 or more workers at the time of closing. Data from testimony of Douglas Fraser, President of the U.A.W. before the U.S. Senate Commerce Committee, December 16, 1982.

3. Data from the Automotive Parts Manufacturers' Association.

Table 3.2

Estimated 1981 World Production Capacity and Utilization by Region

(millions of units)

Region	Car/Truck Assembly Capacity	Car/Truck Total Production	Capacity Utilization	
U.S. and Canada	14.8	9.2	62%	← Lowest level in the world
Western Europe	15.2	11.9	78%	
Japan	10.7	11.1	104% *	
Eastern Europe & USSR	3.5	3.3	94%	
Latin America	2.8	1.8	64%	
Southeast Asia	1.6	1.2	75%	
Other	0.8	0.6	75%	
Total	49.4	39.1	79%	

* Japanese capacity is based on nominal straight time work schedules. Japanese workers are scheduled for 25 hours of planned overtime a month which, if considered as part of planned capacity, would boost Japanese capacity to 13 million units and reduce their utilization to 85%.

Sources: U.S. Transportation Systems Center; "World Automotive Market", 1982 Edition, published by Automobile International; and U.S. Department of Commerce.

THE HUMAN COST

The human cost of these plant closings and the elimination of second shifts at many of the plants that remain open has been high. Throughout 1982 the number of Canadian automotive workers on indefinite layoff stayed above 13,000 and was at times as high as 17,000. Roughly 65% of those on indefinite layoff were from the independent parts industry. In addition, thousands of other Canadian workers in both vehicle and parts plants were often on temporary layoff, sometimes working only one week out of every two. In the United States, the number of automotive workers on indefinite layoff in 1982 ranged from a low of 218,000 in July to a high of 264,000 in December.[4]

4. Canadian data from U.A.W. Canada. U.S. data from the U.S. Transportation Systems Center.

But the real cost of the current crisis is much higher than these numbers indicate, because indefinite layoff figures do not usually include those workers whose plants have been shut for good and who thus have no prospect of recall.

The human cost of the crisis can thus be seen even more clearly i the decline in the general level of automotive employment. Overall employment in both the Canadian and U.S. automotive assembly and parts industries has dropped substantially from recent peaks. Official statistics indicate that Canadian employment in vehicle assembly and parts manufacturing peaked in 1979 at 124,000 workers, but has since dropped by 21,000 to an estimated 103,000 workers in 1982.[5] The decline in employment has been equally severe in the vehicle assembly and parts segments (both captive and independent) of the industry, with each losing about 17% of its workforce. These figures do not includ the additional unemployment in related industries, such as iron mining, steel, aluminum and rubber, that can be attributed to the automotive cr

The drop in automotive employment in the U.S. has been even more severe than in Canada. From a peak of 1,190,000 workers in 1978, total employment declined by 24% to 909,000 workers in 1981.[6] U.S. employment declined more than Canadian employment because the demand for larger car models, which have made up much of Canadian assembly capacity, continued to be strong through 1982, and because Canadian productivity and manufacturing quality have remained high relative to comparable plants in the U.S.

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5. 1979 figures from Statistics Canada. 1982 figure is Task Force estimate based on preliminary Statistics Canada data. Actual employment of workers in assembly and parts manufacturing is higher than these official statistics indicate. See general note on statistics in Appendix 2.

6. U.S. Department of Commerce. For derivation see Appendix 5, Table A-1. 1982 estimates suggest that employment dropped by another 10-15% over 1981. U.S. employment numbers have many of the same undercounting problems that we described in regard to Canadian statistics. See Appendix 2.

The effects of the crisis have been particularly severe in those communities that depend on the industry, including Windsor, Ste Thérèse, Hamilton, and others. In Windsor the social effects of automotive unemployment became fully evident only in 1982 when unemployment benefits for many Windsor auto workers expired. In 1982 the caseload of Windsor social services increased by 24% to 4,917 individuals and families, up from 3,964 cases in 1981. The Essex County social services caseload increased by 84% in the same period. The number of personal bankruptcies in Windsor was up by 41% between 1981 and 1982. Emergency grocery orders filled by the Red Cross were up 24%, and the Children's Aid Society caseload was up by 11% over 1981.[7]

Although the recession has taken its toll on almost all Canadians, the automotive crisis has left a significant number of Canadian families and individuals in particularly difficult circumstances. The pattern demonstrated in Windsor by the increased demand for social services has been repeated on a smaller scale in dozens of Canadian communities as automotive, steel and other related plants close and shifts are laid off. The Task Force is concerned that it is all too easy to become desensitized to the human costs of an industrial crisis. For the vehicle assembly and parts workers of Canada, and for wage earners in hundreds of companies in related industries, the problems of the automotive industry have had a real and all too personal effect.

THE FINANCIAL COST

The current crisis has left North American vehicle and parts companies in a significantly weakened financial state. The depressed market conditions of the past three years and the growing volume of imported vehicles have resulted in large financial losses in the industry. At the same time, the vehicle and parts companies have

7. Figures from the Unemployed Help Centre in Windsor and U.A.W. Canada.

been faced with heavy demands for new investment in plant, equipment and product development, much of which has been directed at retooling to produce the smaller, more fuel-efficient cars consumers have demanded. In a market downturn most companies reduce their capital investment, but the automotive industry has had to do just the opposite.

Between 1980 and 1982, General Motors, Ford and Chrysler lost a total of $870 million on their Canadian operations. Over the same period they incurred worldwide losses of $5.5 billion.[8] As Table 3.3 indicates, the worldwide financial position of each of the three companies has improved since 1980. Over the last three years the vehicle companies have greatly reduced or eliminated their losses by closing plants, laying off second shifts, and reducing overhead in all business segments. Ford alone has reduced its white collar workforce by 25% in the last two years and by 1982 had cut its 1980 losses by over half. GM has been successful enough in cutting costs that it reported a slight profit in 1981 and a 5% return on equity in 1982. Chrysler also moved back into the black in 1982 with a $210 million profit, although this included the proceeds from the sale of its defence operations.

It is important to note, however, that with the exception of Chrysler the financial position of the vehicle companies in Canada has not mirrored this improvement in their worldwide operations. General Motors of Canada saw its 1981 loss of $10 million increase to $70 million in 1982. Ford's Canadian operations reduced their 1981 loss of about $300 million to $190 million in 1982, but this was still substantially higher than the 1980 loss of $120 million. The continuing financial difficulties of General Motors and Ford in Canada are a result of the sharp decline in Canadian vehicle sales in 1982, the marked increase in the share of the market captured by imports,

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8. All dollar figures in this chapter are in Canadian dollars, calculated at the average annual noon exchange rate. See Bank of Canada Review, 1965-82.

Table 3.3

Canadian and Worldwide Profits and Losses
For General Motors, Ford and Chrysler, 1977-1982
($ millions Canadian)

	1977		1978		1979		1980		1981		1982		Total 1980-1982	
	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World
General Motors	180	3,550	200	4,000	250	3,390	60	(910)	(10)	380	(70)	1,170	(20)	640
Ford	30	1,780	10	1,810	(10)	1,360	(120)	(1,800)	(300)	(1,270)	(190)	(810)	(610)	(3,880)
Chrysler	10	170	(30)	(230)	(90)	(1,290)	(200)	(2,000)	(60)	(570)	20	210	(240)	(2,360)
Total	220	5,500	180	5,580	150	3,460	(260)	(4,710)	(370)	(1,460)	(240)	570	(870)	(5,600)

Source: Companies.

and the large investment required for retooling Canadian operations. By contrast, the U.S. market experienced a much smaller decline in sales in 1982 and, as noted previously, import penetration of the U.S. market began to level off in 1982.

Concurrent with the losses incurred in the last several years, automakers have faced unprecedented requirements to invest in new plants and tooling to downsize their passenger vehicles. In just three years, between 1980 and 1982, the Big Three invested $3.2 billion in new plant and tooling for their Canadian operations. This amounted to 8% of the $40 billion they spent worldwide on new plant and equipment. (See Table 3.4.)

Although this investment is necessary if they are to remain competitive, it has taken a significant toll on the financial strength of the companies. The net funds generated by the worldwide operations of the Big Four in 1980-82 were $19.5 billion,[9] while the requirements for new plant and tooling were $40 billion, thus resulting in a major shortfall in funds over the three-year period. The companies made up this operating shortfall by depleting working capital and significantly expanding long-term debt and other liabilities. Long-term debt as a percentage of total capitalization doubled at Ford and more than tripled at GM between 1979 and 1982. AMC required a substantial infusion of capital from Renault to meet its shortfall, while Chrysler was able to meet its financing requirements only with the offer of loan guarantees from the U.S. and Canadian governments. In sum, the current crisis has left the major vehicle comapnies with balance sheets that reflect a much weakened state at a time when they face heavy continuing financial demands imposed by the marketplace.

Automotive parts manufacturers have also suffered financially during the crisis. A recent survey of 23 major publicly-owned U.S. parts companies (most of which had operations in Canada) found that

9. Net funds generated by operations were calculated as depreciation and amortization plus net after-tax profits (losses).

Table 3.4

Canadian and Worldwide Plant and Tooling Expenditures

For General Motors, Ford and Chrysler, 1977-1982

($ millions Canadian)

	1977		1978		1979		1980		1981		1982		Total 1980-1982	
	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World	Cdn.	World
General Motors	300	3,880	160	5,210	320	6,310	760	9,070	1,070	11,680	320	7,670	2,150	28,420
Ford	130	1,880	180	2,900	210	4,030	460	3,240	230	2,670	90	3,660	780	9,570
Chrysler	60	770	70	770	50	880	60	980	80	550	100	460	240	1,990
Total	490	6,530	410	8,880	580	11,220	1,280	13,290	1,380	14,900	510	11,790	3,170	39,980

Source: Company Annual Reports.

of the 15 companies that reported a separate return on assets for their automotive segments, all but two reported a sharp decline in return on assets in 1980. The declines averaged 53% for the 13 companies. Most of the firms reported that their profitability increased in 1981, although only three firms had returns that approached 1979 levels.[10]

The performance of four of the largest publicly-owned parts companies in Canada (Magna International, Hayes-Dana, Budd Canada and Kelsey-Hayes Canada) reflects similar sharp declines in profitability in 1980, followed by somewhat better returns in 1981. However, profitability for each of these four Canadian companies dropped sharply again in 1982, and each saw a return on equity in 1982 that was well under the low levels of 1980.

Most of the Canadian-owned parts companies in the industry are small and privately held, and the retooling necessary to continue supplying components for the new generation of North American cars has placed particularly severe burdens on them. Raising new equity and debt to finance new investment - or just to survive in the midst of an industry recession - has been extremely difficult. Many of these companies are under-capitalized relative to the new demands for investment being placed upon them. Nor have they always been successful in raising capital from Canadian banks, who are wary of the cyclical nature of the industry. In Chapter 6 we discuss the difficult financial demands that the current crisis has placed on the Canadian-owned segment of the parts industry.

10. Kamath Rajan and Richard Wilson, "Characteristics of the United States Automotive Supplier Industry", January 5, 1983.

CHAPTER 4

THE NEW COMPETITIVE ENVIRONMENT

The current crisis in the North American automotive industry is much more than just a temporary downturn in an industry noted for its cyclical nature. Automotive sales tend to correlate closely with changes in GNP and can be expected to rise in late 1983 or 1984 if a general economic recovery takes hold. But even if this occurs, the problems facing the North American automotive industry will not disappear. At the heart of the current crisis lie fundamental changes in the nature of world markets and in the basis for competition in those markets. A successful Canadian automotive strategy must respond to these changes and, to the extent possible, take advantage of them.

CHANGES IN WORLD MARKETS

Identifying market trends in the automotive industry is difficult, given that vehicle sales are cyclical, and straight-line extrapolations of current trends are usually far from accurate. The surge in large car sales in the U.S. market last year, for example, was generally not predicted and in fact caused major product planning problems for several vehicle companies that had expected to phase out more large car capacity. Nevertheless, identifying long-term trends in world markets is crucial to understanding both the current automotive crisis in Canada and the options available for assisting the industry out of it. We examine two of these key trends: the slowing growth of sales in the major markets and the shift to smaller cars in North America.

Slower Growth

The extreme ups and downs of the U.S. vehicle market in the 1970s tended to mask the slower rate of growth in that market. The U.S. market, which is by far the largest in the world, expanded quite rapidly in the 1960s, averaging a four to five per cent compound annual growth rate. (See Table 4.1.) By the 1970s, the compound growth rate for new motor vehicle registrations had slipped to only one to two per cent per year, and even the most optimistic forecasts predict average growth through 1990 at about the same rate.

The Canadian market for new vehicles has been slower to show the trends evident in the U.S. market, but is nonetheless following the pattern seen there. New motor vehicle registrations rose by four to five per cent per year on an annually compounded basis through the 1960s and 1970s, but were levelling off by 1980. Forecasts of market growth in Canada in the 1980s are, for the most part, in the one to three per cent range, indicating a slow growth market here as well.

Despite the slow growth expected for the long term, sales increases in the next few years in Canada and the U.S. may be quite significant given the pent-up demand that has built during the current economic downturn. Some forecasters believe that by 1987 vehicle sales could return to 1978 or 1979 levels, which would mean an additional 1-1.5 million additional vehicle sales per year. However, such an upturn, welcome as it might be to the industry, would represent only part of a short-term cycle, and not a contradiction of the long-term trend to slower growth.

The other major automotive markets in the western world also experienced sharply lower growth rates in the 1970s. (See Table 4.1.) The slowdown in market growth was most dramatic in Japan, where the compound annual growth rate dropped from 30% in the 1960s to between one and two per cent in the 1970s. Projections are for continued lower rates of growth in all major industrialized markets through the 1990s. (See Table 4.1.) Although some less industrialized countries will likely experience more rapid growth in the coming decade, market growth in the less industrialized world will not become a significant factor in overall world demand in the near term.

Table 4.1

Estimated Compound Annual Growth Rates* In New Vehicle Registrations In Five Major Markets, 1950-1990

	Canada	U.S.	Japan	West Germany	France
1950-1960	2%	1-2%	28%	13%	12%
1960-1970	4-5%	4-5%	30%	6-8%	8%
1970-1980	4-5%	1-2%	1-2%	2-3%	2-3%
1980-1990 (est.)	1-3%	1-3%	1-3%	1-3%	1-3%

* These estimates were calculated by averaging peak to peak and trough to trough compound annual growth rates for the periods named.

Source: For 1950-1980, Task Force estimates were based on annual new registrations data from "World Motor Vehicle Data", 1982, U.S. MVMA. Task Force estimates for 1980-1990 were based on a survey of various independent analyses, including U.S. Department of Commerce, Data Resources Incorporated, Chase Econometrics, OECD, and others.

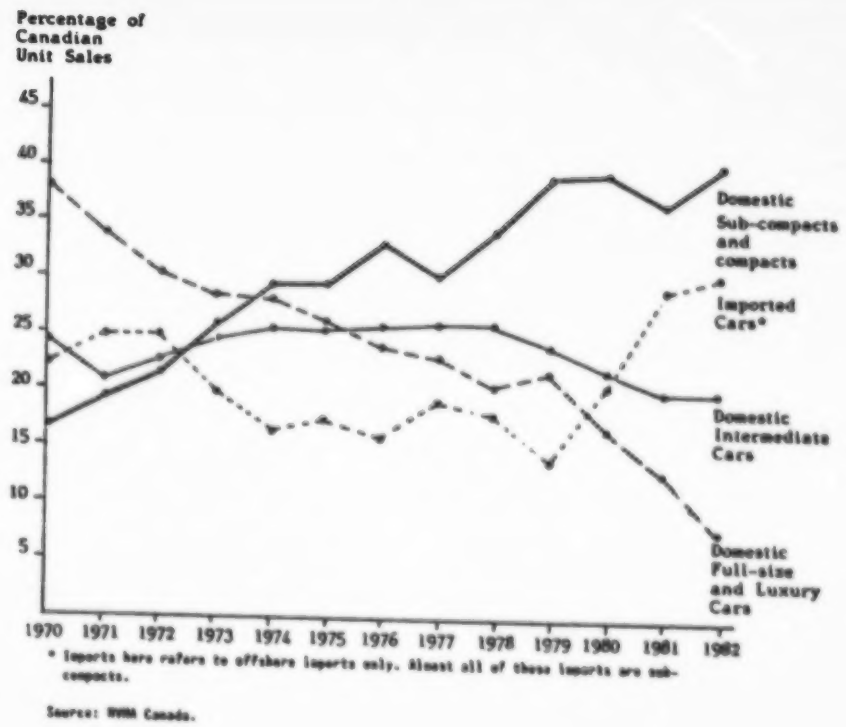
Slower growth in the major world vehicle markets imposes a difficul competitive situation on the world's automotive companies. For the most part, significant growth by any one manufacturer will come at the expense of other automotive producers. Thus, any gains by one country's automotive segment will almost certainly cause structural dislocations in other countries. Additions to capacity, which must usually be made in large increments, will become more risky, and most producers will think carefully about adding capacity before the demand for it is demonstrated.

The Shift To Smaller Cars

Changing consumer requirements and fluctuating oil prices have combined to produce dramatic shifts in the structure of the North America market for passenger vehicles. The share of the market held by full-size and luxury cars began to drop in 1970 and continued to fall until recent months. (See Figure 4.1.) Since 1974, the decline in the popularity of large cars has for the most part been due to rising oil prices.

Figure 4.1

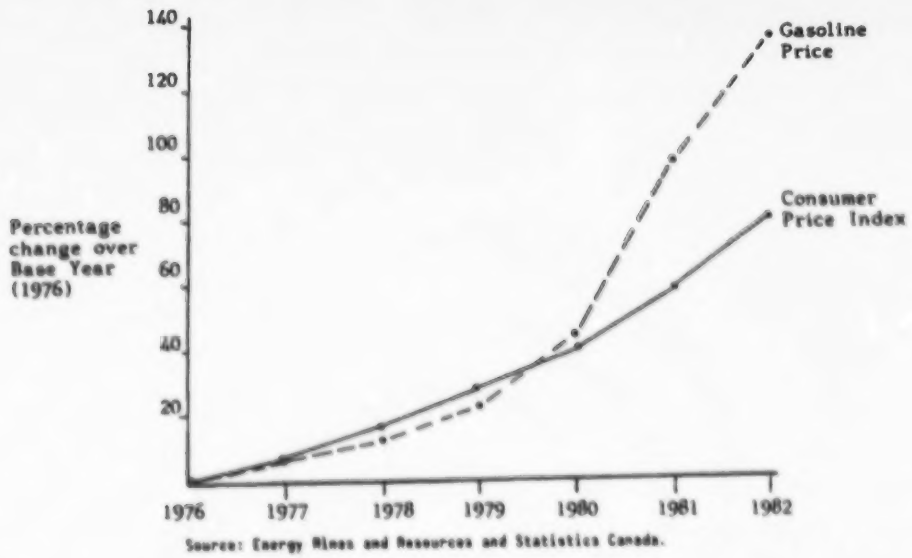
Canadian Sales of Cars by Size, 1970–1982



Although the first oil price shock in 1973–74 tripled the price of crude oil in world markets, it did not result in nearly so large an increase in Canadian and U.S. fuel prices at the pump. The Canadian price of gasoline, for example, actually lagged behind the general increase in consumer prices between 1976 and 1979. (See Figure 4.2.) Thus, although large cars declined in popularity during this period, they did so more slowly than they might have had Canadians and Americans been paying world prices for fuel.

Figure 4.2

Gasoline Price Change Compared to Consumer Price Index in Canada, 1976-1982



Source: Energy Mines and Resources and Statistics Canada.

But after the second oil price shock in 1979-80, U.S. fuel prices reached world levels, and energy policy changes pushed Canadian price closer to world levels as well. This sharp increase in gasoline prices between 1979 and 1982 has had a dramatic effect on the market for large cars. The North American large car share of the Canadian market fell from 22% to 8%, while offshore imports - almost all of which were small cars - increased their market share from 14% to 31%. While sales of North American-produced compacts and sub-compacts had grown from 17% of the Canadian market in 1970 to about 40% in 1982, North America manufacturers were not able to capitalize on the declining popularity of large cars to the degree that imports did.

Oil prices have been dropping on world markets in recent months and, if stable or lower prices continue over the next few years, buyer interest in large cars may come back. Nonetheless, the market has changed in fundamental ways: fuel efficiency has become a major compe tive factor, shifting market preferences toward smaller cars.

QUALITY, PRODUCTIVITY AND TECHNOLOGY: THE NEW BASIS FOR COMPETITION

The factors that determine competitive success in the North American environment have shifted significantly in the last decade. From World War II until the 1970s, competition among the North American automakers focused on obtaining better economies of scale in production, on coming up with more attractive vehicle styling, and on building effective marketing and distribution networks. Today, improved product quality, the pursuit of productivity through new manufacturing systems, and technological innovation have taken their place as the principal factors in competition.

Prior to the 1970s, most of the productivity growth in the automotive industry - which was substantial in that era - was due to the design and construction of ever more efficient production facilities, with specialized tooling and automation to achieve maximum economies of scale. As each new plant came on stream, that particular company's productivity would increase, but it was a temporary advantage that lasted only until other companies built even more productive facilities. A sustainable advantage in manufacturing costs could come only from achieving higher market penetration and hence greater production volumes. Thus, the vehicle companies focused their competitive strategies on styling and marketing so that they could achieve the economies of scale associated with longer production runs.

Similarly, although there were certainly quality differences between models and makes, whether measured in terms of fits and finishes or trouble-free operation, quality was not the competitive factor that it is today. Given the standardization of production processes, all companies were using similar equipment and manufacturing to achieve similar tolerances. When quality was important, it was usually defined as luxury or extra features, not quality in the manufacturing process.

Nor did technological innovation offer lasting opportunities for achieving competitive advantages. Most technological innovation was incremental, and major product advances, when they did occur, were quickly diffused throughout the industry. Technology in the 1945-1970 period was, on the whole, competitively neutral. Consumers were rarely offered choices between competing technologies, and marketing efforts did not focus on technology-related differences between products.

The competitive situation has changed profoundly in the past decade. With the arrival of tough economic times the functional aspects of quality - trouble-free operation, fuel efficiency and value for money have taken on greater appeal. At the same time that consumer preferenc have been shifting, the Japanese manufacturers have demonstrated that dramatic productivity growth can be obtained in ways other than the relentless pursuit of economies of scale. Moreover, technological innovat has accelerated rapidly, taking on a renewed significance reminiscent of the industry's earliest days when basic vehicle technology was changing every few years.

The New Emphasis On Quality

The competitive environment is demanding a new emphasis on quality in manufacturing, particularly with regard to durability and reliability. In marketing surveys consumers now identify quality as their single greatest concern, and the vehicle companies have responde by developing competitive strategies centred around differentiating their products on the basis of superior quality. Quality-based competiti is taking place on several levels:

- Design quality that emphasizes trouble-free operation, better fits, fewer parts, longer component life cycles and simple maintenance.

- Manufacturing quality that focuses on producing good fits and finishes and trouble-free operation.

- Dealer service and maintenance that provides low-cost and effective repair work.

Quality-related competition will also take place at the level of perceptions. Advertising will increasingly be used to influence consumers' perceptions of the three dimensions of quality listed above. In Chapters 5 and 6 we elaborate on the North American response to the new demands for quality.

The Productivity Challenge

In recent years the Japanese vehicle and parts manufacturers have introduced a new standard of productivity to the world automotive industry. All other vehicle and parts manufacturing countries are now responding to meet the competitive challenge posed by the Japanese, and the Canadian industry is no exception, as we demonstrate in Chapters 5 and 6.

It is important to note that in striving for greater productivity the Canadian industry is already starting from a high base relative to the rest of the world, with the exception of Japan. Internal analyses at General Motors, Ford and Chrysler indicate that productivity (measured on the basis of hours worked per unit produced) in their Canadian assembly and parts plants is equal to or greater than that of comparable plants in the U.S. These same studies indicate that Canadian productivity is competitive with European levels of productivity and is superior to the productivity achieved in other automotive countries like Mexico and Brazil. Nonetheless, the Canadian automotive industry is well aware that the new standard set by the Japanese has established a major challenge for productivity performance in the Canadian industry.

Improving productivity will not be simply a matter of increasing investment in plant and equipment or getting workers to work harder. As the Japanese have found, it is a complex matter of getting all level of management and labour working together to find better ways of organizing and managing the production process and making it work better. There is ample evidence that the Japanese productivity advanta is not a result of greater capital investment, newer equipment, or more sophisticated technology.[1] While recognizing the benefits of autom and the advantages of economies of scale, the Japanese manufacturers have pursued productivity gains through major improvements in their manufacturing systems and management techniques. In this regard they have emphasized all of the following:

- Quality control systems that make use of statistical process control as well as effective worker and supplier involvement. Quality and productivity are inextricably linked.

- Just-in-time production systems where inventory is sharply reduced and suppliers deliver product direct to the manufacturing process.

- Good worker/management relations and opportunities for greater worker involvement in solving production problems.

- Minimized production downtime through improved maintenance, reduced set-up times, job flexibility and other efforts.

- Product designs that integrate manufacturing considerations and efficiencies more closely into the overall design.

1. See, for example, U.S. National Academy of Engineering, "The Competitive Status of the U.S. Auto Industry", 1982.

The productivity gap with the Japanese can be closed, but the Japanese advantage in productivity explains only part of the Japanese cost advantage. A number of recent independent studies and internal corporate analyses at the major vehicle companies have attempted to estimate the Japanese cost advantage over U.S. vehicle producers.[2] Adjusting for exchange rates and Canadian wage rates, which are only 70% of U.S. labour rates, and assuming productivity in Canadian plants is the same as that in U.S. plants, the estimates from these U.S. studies suggest that the Japanese vehicle companies have a landed cost advantage before duty of roughly $1,500 to $2,100 per small car over Canadian vehicle producers.

It is difficult to define precisely how much of this cost advantage is due to higher productivity. Most estimates suggest that less than half is accounted for by better productivity. As least as important are factors such as lower wage rates, lower corporate and employee taxes, exchange rates and, in some areas, lower material costs. Wage rates in the motor vehicle and equipment industry in Japan, including all company-paid fringe benefits, have been only 60-70% of Canadian labour rates in recent years. (See Figure 4.3.) This wage differential does not even take into account the cottage supplier industry in Japan, which accounts for about 10% of all automotive workers, where families and small shops of fewer than four workers work at wages well below even Japanese standards.

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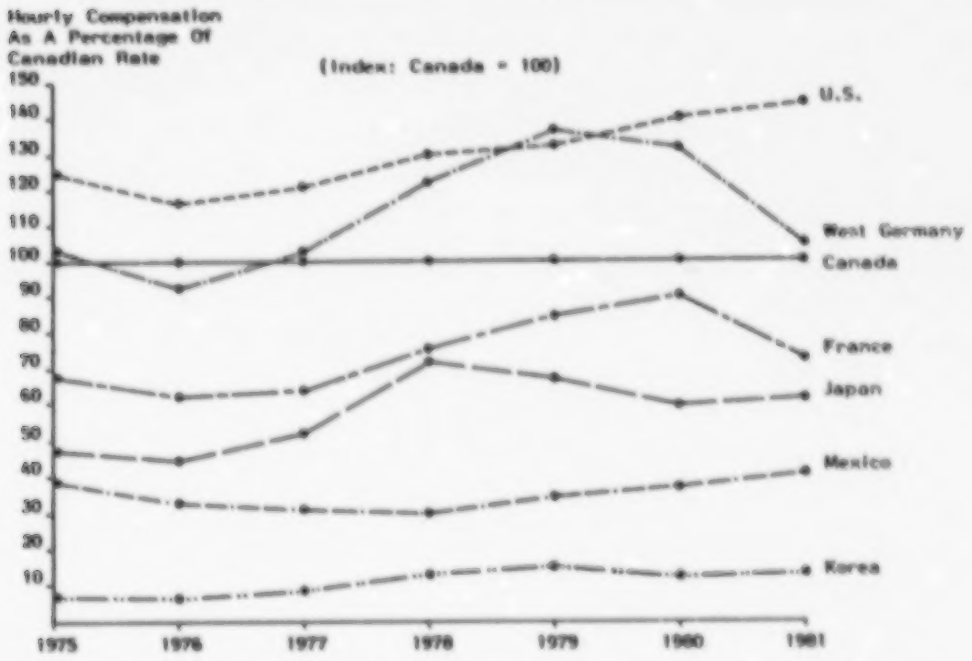
2. See William Abernathy, James Harbeur and Jay Mehn, "Productivity and Comparative Cost Advantages: Report to the U.S. Department of Transportation", 1981; U.S. National Academy of Engineering, "The Competitive Status of the U.S. Auto Industry", 1982; and J.F. Smith, "Prospects and Consequences of American-Japanese Company Cooperation", a paper presented to the Third U.S.-Japan Automotive Industry Conference, March 16, 1983.

Figure 4.3

Estimated Total Hourly Compensation Costs for Production Workers in Motor Vehicle and Equipment Manufacturing



* All costs include wages and company-paid fringe benefits. 1981 data are preliminary estimates. Provisional 1982 estimates suggest that Canadian automotive labour rates increased in 1982 relative to the other countries.

Source: U.S. Bureau of Labor Statistics, Office of Productivity and Technology, December 1982.

Tax differences between Japan and Canada also contribute to the Japanese cost advantage. The Japanese government relies on commodi taxes on vehicles for general revenue more than the Canadian government does. Under GATT provisions it is permissible not to charge, or to rebate, indirect taxes, such as commodity taxes, on exports and to charge them to imports. For countries like Canada that do not rely heavily on indirect taxes that can lead to a situation where the total tax bill borne by domestically produced products can be greater than that borne by similar imported products.

The cost advantages that Japan has over Canada will be difficult to overcome. The wage difference, although it may close in the coming years as Japan's standard of living continues to rise, is indicative of the structural and industrial policy differences between Canada and Japan. So, too, are the tax differences between the two countries.

Thus, even if the Canadian industry closes the productivity gap, a residual Japanese cost advantage will remain.

A further problem for the Canadian industry and most other automotive-producing countries has been the movement of the japanese yen relative to other currencies. Over the 1978-1981 period, the yen ranged in a narrow band between 180 and 195 yen to the Canadian dollar and averaged 186 to the dollar. Over this period, producer prices as measured by the Industry Selling Price Index rose 9.4% per year in Canada, while a similar measure for Japan showed a 5% annual increase. This 4.4 percentage point per year differential should have caused the Japanese yen to appreciate in value, but it did not. The faster rise in input prices for manufacturers based in Canada, coupled with a relatively unchanging exchange rate, created a cost squeeze in competing with Japanese imports.

Starting in March 1982, the yen began a rapid fall aginst the dollar; by October 1982, it had dropped to 221 yen to the Canadian dollar. This decline of 35 yen to the dollar would be equivalent to a 16% or $800 cost advantage on a vehicle with a landed cost (before freight and duty) of $5,000. In addition, producer prices rose 6% in Canada in 1982 while they rose only 1.2% in Japan. Again, this inflation differential should have caused the Japanese yen to appreciate against the Canadian dollar, but it actually depreciated in value. This widening inflation differential, coupled with the depreciating yen, has added to the Japanese cost advantage. The yen has since stabilized at about 190 yen to the dollar. But currency rates that do not react to changes in purchasing power will continue to be a competitive factor that can compound the Japanese cost advantage and over which Canadian vehicle and parts companies have no control.

The Technology Imperative

The automotive industry has entered a period of technological innovation and diversity that defies any description of the industry as "mature". Until recently, the history of technological development in the auto industry followed the pattern of most maturing manufacturi industries - from a state of technological diversity in products and manufacturing processes and radical technological change, to a state of standardized product and production technology and incremental technological innovation.[3]

Between 1945 and 1970, most technological innovation focused on improving product performance while preserving existing manufacturing plants and processes. But rising fuel prices and emission control regul tions placed new demands on the design and performance of automobile in the 1970s that required a new kind of technological innovation. Today, the pattern of innovation has swung dramatically in the directi of radical change and technical diversity. Major innovations with broa applications in the last seven years include the transverse front wheel drive axle, turbocharging, electronic engine controls and diagnostics, and widespread substitution of materials. Engines provide a good exam of the current technological diversity in the industry; gasoline or dies powered engines with four, five, six or eight cylinders, turbochargers, and a variety of computerized controls are available.

Technological innovation in the factory is also proceeding at a rapid rate. Robots, programmable controllers, computer-aided design and manufacturing, lasers, and other advanced technologies are increa ingly being used in vehicle and parts production. As computers become prevalent, manufacturing flexibility is growing and changeover times are shrinking. These changes are beginning to erode the former

3. For more on the nature of technological innovation in the North American automotive indust see William Abernathy, The Productivity Dilemma, 1978, and the U.S. National Academy of Engineering, "The Competitive Status of the U.S. Auto Industry", 1982.

advantages of economies of scale, making smaller, more flexible production systems competitive.

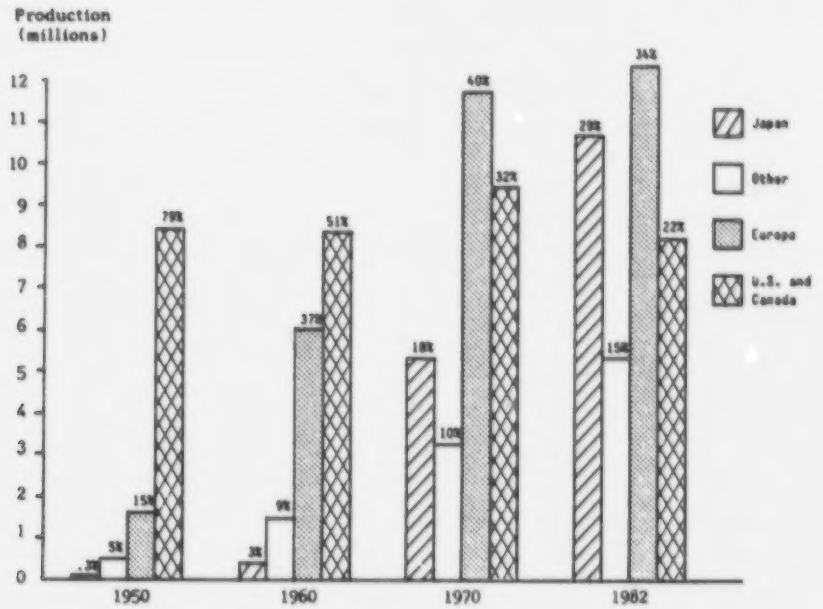
If current trends continue, technological innovation will take on greater significance as a determinant of competitive advantage. Vehicle companies and parts suppliers will find it increasingly possible to use technology to establish differentiated market niches. During a time of technological transformation there are great competitive opportunities as well as great risks. The key to success for most companies will lie in identifying and developing winning technologies early, and then creating defensible market niches around them.

THE INTERNATIONALIZATION OF THE MANUFACTURING BASE

Just as the nature of markets and the basis for competition have changed, so has the makeup of the world automotive manufacturing base. In the years immediately following World War II, the North American automotive industry dominated world vehicle production, building more than 80% of all vehicles. After recovering from the war in the late 1940s and early 50s, the European industry achieved a 37% share of world production by 1960, while the North American share declined to 51%. (See Figure 4.5.) In the 1960s and 1970s, the dominance of the North American and European industries gave way to the ascendency of the Japanese automotive industry, and by 1980, Japanese manufacturers were producing more vehicles than North America and nearly as many as all of Europe. Most of the growth in both the European and Japanese automotive industries stemmed from the rapid expansion of their domestic markets, although in the last decade continuing growth in Japanese production has come to depend heavily on exports.

Figure 4.4

World Motor Vehicle Production by Region



Source: 1950-1971 data: U.S. NVMA, "World Motor Vehicle Data", 1982 Edition; 1982 data: Ward's Research Department.

The growing importance of European and Japanese manufacturers has resulted in a steadily declining degree of corporate concentration in the world assembly industry. In 1965, seven manufacturers had 2.5% or more of world capacity; by 1980, eleven did. General Motors and Ford had half of world production between them in 1965; by 1980 this share had dropped to 30%, although this was 30% of a much larger base. (See Table 4.2.) The steady decline in corporate concentration has been accompanied by a gradual increase in international competition following this growing internationalization of markets. The world manufacturing base has been slowly evolving from a structure composed of discrete domestic industries to one characterized by increasingly integrated global operations. Several factors have accelerated this evolution in recent years.

Table 4.2

Manufacturers with 2.5% or More of the World Market

1965		1980	
1) General Motors	30.9%	1) General Motors	18.8%
2) Ford	19.6%	2) Ford	11.5%
3) Chrysler	09.6%	3) Toyota	8.7%
4) VW	07.3%	4) Nissan	7.0%
5) Fiat	05.3%	5) VW	6.8%
6) Renault	03.0%	6) Renault	5.4%
7) Toyota	02.5%	7) Peugeot	4.4%
		8) Fiat	3.6%
		9) Toyo Kogyo	3.0%
		10) Mitsubishi	2.9%
		11) Honda	2.5%

Source: U.S. MVMA, "World Motor Vehicle Data 1982"; Toyota Motor Sales, "The Motor Industry of Japan 1982".

Trade Treaties and Arrangements

A variety of treaties and other trade arrangements has encouraged international trade in finished vehicles. The two most prominent are the Canada-U.S. Auto Pact, which created a conditional duty-free environment for automotive trade within North America, and the treaties creating the European Economic Community, which produced similar conditions in most of Western Europe. The General Agreement on Tariffs and Trade (GATT) also succeeded in lowering some tariff barriers to automotive trade in a number of countries. These agreements, and the growing productive capacity of Europe and Japan, contributed to substantial

increases in the trade in finished vehicles over the past 25 years. In 1955, less than 2% of all new vehicle sales in the world's seven largest markets[4] were imports. By 1970, 14% of the new vehicles sold in these markets were imports, and by 1981 the import share had grown to 24%.[5]

Much of this increased activity was in the form of two-way trade as between Canada and the U.S. under the Auto Pact or between Europe countries under EEC agreements. In fact, by 1981 nearly 40% of all world trade in vehicles was conducted under the Auto Pact or within the EEC. But an even greater share of this growing world trade was one-way trade in the form of vehicle exports from Japan. By 1981 Japan accounted for over 45% of all world vehicle exports and less than one half of one per cent of world imports.

The growth in one-way vehicle trade from Japan has resulted in the return of automotive trade barriers in most of the major vehicle-producing countries. Governments have taken actions to protect their domestic producers - or at least to force major importers to manufacture vehicles or components locally. These new trade restrictions are having the effect of further encouraging the internationalization of the industry as vehicle companies build wholly-owned plants in these countries or enter joint ventures with domestic producers.

Local Content Requirements

The efforts of countries with fledgling or no automotive industries to secure local vehicle or parts production is another factor contributin to the internationalization of the industry's manufacturing base. (Appen 6 includes a listing of which countries have content requirements and detailed descriptions of what those requirements are.) Local content

4. They are, in order of current size, the U.S., Japan, Germany, France, Italy, the U.K. and Canada.

5. Compiled from individual country statistics in "World Motor Vehicle Data", 1982, U.S. MVMA.

requirements in countries such as Brazil, Mexico, Australia and Spain have been a major influence in the establishment in those countries of engine or vehicle manufacturing operations that are integrated into the worldwide production systems of various companies. For example, Ford produces engines in Brazil for export to the U.S. and Japan, and GM produces engines in Brazil for export to its assembly operations in the U.S., West Germany and Britain. In Mexico, GM, Ford, Chrysler, Renault, Volkswagen and Nissan all produce, or will soon be producing, engines for export to assembly operations in other countries. GM, Ford and Renault are building cars in Spain for export throughout the EEC.

In other countries, local content requirements have been structured to procure assembly facilities for completely knocked down (CKD) kits of parts, which arrive ready to be assembled. Although the output of such plants is usually destined for domestic use, the facilities have the effects of internationalizing the production base, because some assembly and finishing operations have to be transferred from the exporting country.

Joint Ventures

International integration is also being encouraged by the financial advantages to be gained from joint ventures between two or more vehicle companies. Vehicle assembly and engine or transmission production must be carried out on an enormous scale to be cost competitive, and it has become increasingly common for automotive manufacturers to enter joint ventures to build new facilities. Other companies are purchasing key components from competitors until demand justifies building their own facilities.

Increasingly, companies with complementary needs are coming together for mutual competitive advantage. For example, American Motor and British Leyland, companies with strong marketing capabilities but inadequate financing to develop new models, have joined hands with Renault and Honda respectively, companies that have strong financing, design and production capabilities. Joint arrangements can take the form of equity holdings, licensing agreements, joint financing or techni ties, as well as other linkages, and all such arrangements have proli- ferated dramatically in recent years. Appendix 7 contains a partial listing of the many joint ventures and other links between the world's major vehicle companies.

In many cases joint arrangements serve both competitive and trade purposes. In the Honda-British Leyland case, Honda wanted great increased access to the EEC market. (The EEC has limited Japanese imports through a variety of informal mechanisms.) For its part, Britis Leyland wanted Honda's manufacturing and product development experti The agreement thus took the form of a joint venture whereby British Leyland produces Honda cars under licence in the U.K. for shipment throughout the EEC. Similarly, Toyota and General Motors recently announced plans for a joint venture to manufacture a new small car in California. In many other large and small markets, the Japanese companies have set up assembly or component production operations on a wholly-owned or joint venture basis, primarily to gain or maintai market access. Examples of these range from larger scale operations in Autralia, Mexico, Taiwan and the U.S. to smaller scale operations in India, Indonesia, Italy and Spain.

THE GROWING IMPORTANCE OF GOVERNMENT POLICY

Governments in many countries have developed policies to assist or support the strategies of their national automotive industries - and the level of assistance is on the increase, making government policy a factor of growing significance in the new competitive environm

In most countries, government support takes three forms: an automotive trade policy, a manufacturing tax policy, and direct government assistance in the form of loans, grants, investments or other devices.

Most automotive producing countries now have some restrictions on automotive trade designed to protect their domestic industries. Many of these take the form of local content laws combined with quotas or high tariffs. An increasingly popular mechanism, because it circumvents potential problems with GATT, is the voluntary restraint agreement. To date, most such agreements have been negotiated with the Japanese, because of their significant penetration of most markets. The French government dispenses with all traditional trade restrictions and holds Japanese producers to just 3% of the market by administrative fiat. The most extreme trade protection of all was practised in the late 1950s and 60s by the Japanese government, which prohibited imports altogether in order to ensure the development of its domestic automotive industry. (In Appendix 6 we summarize the major automotive trade policies of various countries.)

Manufacturing tax policies have also become a significant consideration. Japan and the members of the EEC have based their tax structures more on indirect taxes and less on direct taxes than have Canada or the United States.[6] For example, the Japanese assess indirect taxes of 17.5% on small cars and 22.5% on large cars sold for use in Japan. In Europe, value added taxes, which are also indirect, are set between 12% and 16%. In Canada, the corresponding type of tax is a 9% excise tax, but domestically produced cars also bear a significant imbedded burden of direct taxes in the form of corporate income, property, and employer payroll taxes. As we noted earlier, the rules of international trade allow governments to rebate indirect taxes on exports. Countries like Canada, which do not rely heavily on indirect taxes, thus find that some of their domestic goods carry a greater tax burden than comparable imports.

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6. Commodity and excise taxes are indirect taxes, and income and property taxes and employers' contributions to public pension, unemployment insurance and similar programs could all be considered direct taxes.

In addition to these policies, many governments also provide a variety of direct incentives to their domestic vehicle and parts companies. These range from general loans or loan guarantees and grants to assistance in financing exports, research and development, and capital expenditures. Increasingly, governments are competing with one another to attract new facilities by offering direct grants for new plants.

In many countries governments are even more directly involved in industry financing through ownership or control of one or more companies. Prominent among the vehicle companies that have some state ownership are Volkswagen in West Germany, Renault in France, British Leyland in the U.K., and Alfa Romeo in Italy.

Some governments, such as those in France, Sweden and Japan, work closely with automotive companies in developing strategies. The Japanese government provides, among other things, consulting services, advice on trade and other matters, and international market intelligenc In most European countries and in Japan, governments also take an active role in managing labour and community adjustments necessitated by industrial change. Companies are not allowed to close plants without adequate warning, and governments work with them to encourage labour mobility, to provide retraining if necessary, and generally to try to mitigate the negative effects of industrial shutdowns.

This kind of cooperation is vital to survival in the new competitiv environment. Effective national automotive programs will be built upon the successful integration of corporate strategies, labour interests and government policies. Trade and tax régimes will have to be structured to support productivity improvements and the procurement of new technol gies. Companies will have to be more open about their strategic intentic and more consultative with their workers and governments. Governments in turn will need to be more supportive of industry priorities. The demands of this new competitive environment will put strains on existin institutions, and they will have to adapt if they are to be successful in meeting the new competitive challenge.

CHAPTER 5

THE MOTOR VEHICLE INDUSTRY RESPONSE

Despite the financial strains imposed by the sharp decline in vehicle sales, North American vehicle manufacturers have responded to the new competitive environment by making substantial investments in product design and development, in new plant and equipment, and in human resource development. At the same time, they have reduced overhead costs and introduced new manufacturing systems designed to improve productivity and quality.

The effects of these steps are becoming evident. Product quality has improved significantly in most vehicle categories, and financial break-even levels have dropped substantially - to the point that two of the companies made small profits in 1982, despite the drop in sales volume from the historically low levels of 1981. As investment in new products, plant and equipment continues, and as the vehicle companies gain further experience with the new manufacturing systems and identify additional applications for them, the competitiveness of the North American industry will continue to grow.

Meeting short and long-term competitive requirements has demanded major changes in the products, systems and organizational structures of the vehicle companies. We look at six areas where this competitive response is taking shape:

- Investment in a fuel-efficient product line
- A changing approach to quality

- The revolution in manufacturing systems
- An improved work environment
- A sustained research and development commitment
- The movement to out-sourcing

INVESTMENT IN A FUEL-EFFICIENT PRODUCT LINE

The vehicle companies are responding to marketplace demands for fuel efficiency in several ways. They have altered their product mixes, expanding production capacity in Canada and the U.S. for compact and sub-compact cars from less than a million units four years ago to almost five million in 1982. At several points in the mid to late 1970s the vehicle companies did not have adequate capacity to meet domestic small car demand, but this is certainly not the case today.

Despite the significance of the trend toward smaller cars, the companies have achieved greater fuel efficiency on all models. Even the larger vehicles being produced at many Canadian facilities are more fuel efficient than they were several years ago - with no reduction in interior room. The fuel efficiency of popular four-door full-size family sedans, for example, improved by over 40% between 1977 and 1983.

The new demands for fuel efficiency have prompted a variety of design changes and technological innovations. Coupled with the shift toward more production of smaller cars, these changes have reduced the weight of the average North American produced car by almost 450 kilograms (1000 pounds) since 1975. The first change was to downsize each type of car as it came up for the periodic model change. (Downsizing means redesigning vehicles to shorten the wheel base, thus reducing overall size and weight, without fundamentally altering the powertrain, braking, steering or suspension systems.)

A much more complex and fundamental change in vehicle design is the movement to front wheel drive. Front wheel drive eliminates the driveshaft and rear drive axle, resulting in greater roominess, reduced weight and fuel savings. Greater roominess in turns allows even more compact design and further weight reductions. Given that front wheel drive cars weigh less than comparable rear wheel drive cars, they can make use of smaller engines without loss of performance.

Front wheel drive has been available for many years on foreign cars and certain North American luxury cars. The industry began widespread adoption of front wheel drive with the introduction of sub-compact models beginning in 1978. In Canada Ford produces front wheel drive cars at its St. Thomas plant and converted the Oakville plant to front wheel drive compact car production in 1983. General Motors converted one of its Oshawa passenger car assembly lines during the 1982 model year to produce front wheel drive mid-size cars. General Motors' other Oshawa passenger car assembly line will also be converted to front wheel drive mid-size model production for the 1984 model year. Chrysler will begin producing front wheel drive vans and wagons at its Windsor assembly plant in 1983. Overall, the conversion to front wheel drive, and the changes it allows, are making possible fuel savings of 5 to 20% per model.

A third key design change having positive effects on fuel efficiency is the substitution of light-weight materials for iron and steel. Aluminum, plastics and high-strength steels are all of increasing importance in vehicle manufacturing. Much of the future improvement in fuel efficiency will result from greater use of high-strength, light-weight materials.

The companies are also adopting new vehicle designs that offer reduced aerodynamic drag and increase fuel efficiency significantly. Computerized engine controls and combustion process research are improving engine and transmission efficiency. Alternative fuels is yet another area where research is expected to achieve positive results.

The result of the move to smaller cars, downsizing, front wheel drive, materials substitution, reduced aerodynamic drag, and other technological and design innovations has been a dramatic increase in fuel efficiency. The average fuel efficiency of all North American-produced cars sold in Canada rose by over 80% in an eight-year period - from 15.3 L/100 km (18.5 mpg.) in 1975 to 9.7 L/100 km (29.1 mpg.) in 1981 to a projected 8.4 L/100 km (33.6 mpg.) for the 1983 model year.[1] Comparisons of 1982 gasoline engine North American and foreign cars found that North American cars had better average fuel efficiency than their foreign competitors in fifteen of the sixteen weight groups in which they compete.[2]

A CHANGING APPROACH TO QUALITY

Until recently the vehicle companies, like most North American manufacturers, relied almost exclusively on inspection to control quality. Defects were detected by quality control inspectors, and the unit was removed from the production line to be reworked to meet specifications or to be scrapped. Underlying this approach was an assumption that too great an emphasis on manufacturing quality could lead to increased production costs. As a result, in the interest of productivity, a certain number of defects was permitted, as long as they were detected at the end of the process.

The companies have now come to recognize that the defect detection approach to quality is simply inadequate given the importance attached to product quality in today's competitive environment. In response, they have instituted defect prevention systems based on process capability analysis and process control using statistical techniques. Instead of sorting out defects at the end of the production

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1. Transport Canada.

2. U.S. Department of Transportation, "The U.S. Automobile Industry, 1981", May 1982.

system, workers use statistical methods to measure variations in certain product tolerances continuously at key stages of the production process. The goal of the defect prevention quality system is thus to produce parts that are not defective.

The vehicle companies have found that a defect prevention approach not only improves product quality greatly but, contrary to conventional wisdom, also increases productivity by reducing scrappage, identifying and clearing bottlenecks, and minimizing downtime and manufacturing costs.

The immediate implementation of statistical process control calls for a massive training effort; the system simply cannot work without the involvement and training of much of the production workforce. General Motors of Canada trained 2,000 employees in 1982 in the basics of statistical process control and expects to train a further 5,000 in 1983. Over 100 key manufacturing people have received the 40-hour version of this course, which focuses on the highly technical aspects of statistical process control. In addition, GM of Canada has adopted the Juran approach to train managers in team problem-solving techniques and to develop the habit of annual quality improvements and annual reductions in quality-related costs. Over 100 project analyses using these techniques are currently under way. Ford and Chrysler have similar training programs in place for both salaried and hourly personnel.

To implement statistical process control throughout the production system, the vehicle companies are looking to their suppliers to participate as well. Ford runs a five-day statistical process control course that all its suppliers are required to attend. General Motors of Canada is providing consulting assistance to many of its parts suppliers to help them adopt statistical process control. Suppliers who cannot or will not adopt statistical process control in their operations are finding that they will not be allowed to bid on future contracts.

In the long run, better parts and vehicle designs will yield further improvements in quality. Parts that are difficult to manufacture with consistent quality are identified and the necessary design or process changes are instituted. Similar efforts are aimed at reducing the number of moving parts in many components and substituting more durable materials where cost permits. Evidence of industry success is showing up in reduced defects and declining maintenance costs. A survey of Ford owners, for example, indicated a 59% decline between 1980 and 1983 in "things gone wrong" in the first three months of ownership, and a U.S. government study estimates that scheduled maintenance costs are 40 to 65% lower for North American sub-compacts than for comparable size imports.[3]

Finally, all the vehicle companies are encouraging greater communication about product quality between dealers and manufacturing management. More extensive market research at the customer and dealer levels is highlighting potential problem areas, and the results are being used to make manufacturing improvements. New emphasis is also being placed on training for service personnel. Ford, for example, has doubled the number of training hours per dealer service technician since 1978.

THE REVOLUTION IN MANUFACTURING SYSTEMS

Radical changes intended to improve productivity in both vehicle and parts manufacturing are under way in each vehicle company and, in several cases, significant improvements are clearly evident. The changes have taken three forms: the institution of just-in-time production to eliminate most inventory; the reorganization of work practices to minimize downtime; and heavy investment in advanced manufacturing technology and automation to improve quality and reduce the labour content of production. These changes have already had

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3. U.S. Department of Transportation, "The U.S. Automobile Industry, 1981", May 1982.

noticeable effects on productivity. Ford reports that its productivity, as measured by hours worked per vehicle, has improved by 13% since 1980. Based on experience to date, Chrysler Canada estimates that its productivity will improve by 4.5% per year between 1981 and 1985.

Just-in-time Production

First introduced by certain Japanese manufacturers, just-in-time production is a process that involves producing and delivering components or materials at the specific time they are needed. Suppliers therefore make frequent deliveries of small quantities. The underlying goal of the just-in-time approach is to eliminate inventory, making all material part of the work in process.

At the heart of just-in-time production is a reliance on much smaller batch sizes and an ability to balance various manufacturing processes for maximum utilization of all equipment. Conventional manufacturing wisdom held that smaller batch sizes are usually uneconomical, but the vehicle companies are finding that if set-up times can be reduced, this does not have to be the case.

The vehicle companies are enlisting the cooperation of their suppliers in the move to just-in-time production. Deliveries of parts, which formerly occurred perhaps once a week, will often now be required daily or even more frequently. General Motors has announced intentions to source more parts from suppliers close to its manufacturing plants to facilitate just-in-time delivery. In the long run, clusters of parts manufacturing firms near major assembly operations will be increasingly common. In the short run, however, it is clear that just-in-time production will be but one of several approaches to improve quality and reduce manufacturing costs in an industry characterized by geographically dispersed operations and supplier networks.

Modified Work Practices

Closely related to the movement to just-in-time production are efforts to reorganize work practices to minimize production downtime. These include better preventive maintenance procedures and more flexible job definitions and staffing arrangements.

Better preventive maintenance has resulted from more frequent maintenance on key pieces of equipment and steps to expand the responsibilities of the average operator to include simple preventive maintenance on his own machine. The movement to just-in-time production places an increasing premium on keeping downtime to a minimum during scheduled hours of operation. The vehicle companies have recognized that all workers, not just the maintenance staff, have a contribution to make in that regard.

The vehicle companies are also seeking to introduce broader job definitions and more flexible staffing arrangements to achieve productivity improvements and to take advantage of the breadth of production skills that most workers have. Greater reliance on machine operators for routine maintenance is one aspect of this change. Another is that the number of job classifications is being reduced. The Ford aluminum casting plant in Essex County, Ontario, operates with only five skilled and unskilled job classifications, compared with more than 40 at other Ford casting plants in the U.S.

Advanced Manufacturing Technology

The vehicle companies are also revolutionizing their manufacturing systems by investing heavily in advanced manufacturing technology and automation. The most visible investment has been the commitment to robotics. The companies have all moved to install robots in a variety of manufacturing settings, including painting, spot

welding, materials handling, assembly and inspection. General Motors of Canada is currently using 130 industrial robots and plans to have 300 by model year 1985 and 1,200 by model year 1990. Ford has over 70 robots in use in its Canadian plants and expects an increase in its robot population through 1990 similar to that at General Motors. Chrysler will be using 122 robots in a single plant, its new T-115 van plant, which will begin production in 1983. Most robots used in the automotive industry pay back their purchase cost in six months to two years of operation. Given that the average life of most robots is five to ten years depending on operating environments, their potential for boosting productivity is considerable.

Other investments in advanced technology, such as programmable controllers, computer-aided design and manufacturing, and automatic testing and inspection equipment, may have even greater effects on manufacturing productivity. Programmable controllers are used extensively to regulate materials flow, automate machine feeding, control machine tools, and automate inspection procedures. Computer-aided design (CAD) is being used to automate overall product design, plant and facilities layout, and die, tool and mould design. At Ford, all body electrical systems, 50% of new body components, and 25% of all other components are being designed using computer graphics. At Chrysler, the use of CAD is also widespread, with 85% of all body components, 60% of suspension components, and 40% of engine components designed using computer graphics.[4]

Computer-aided manufacturing is another part of efforts in Canadian plants to achieve improvements in quality and productivity. Computer-controlled equipment is being used to test transmissions, engines, and emission control systems and to inspect paint quality, vehicle bumper height, front end alignment and other specifications.

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4. Ward's Automotive Yearbook, 1982.

Automatic selection of appropriate transmissions and engines for assembly is accomplished using computer-read bar codes. Suppliers will increasingly be required to identify their parts with bar codes as well.

Automatic checking equipment also offers opportunities for improving quality control and productivity. Lasers, in particular, can perform a variety of quality control functions. Door frames, window openings, trunk lids, and other key body spacings and fits are being checked by laser scanning and gauging devices in Canadian plants. Other automatic testing equipment monitors size and spacing configurations and the alignment of key parts.

AN IMPROVED WORK ENVIRONMENT

In their efforts to meet the productivity and quality demands of the new competitive environment, the vehicle companies have recognized that a significant but largely untapped resource lies in the production expertise of their hourly workers.

The old organizational structure, which imposed strong top-down control of the production process, is gradually being replaced by an approach that relies extensively on group problem-solving at all levels of the business. Under the former approach, a plant could be made more productive at each model changeover by reconfiguring it around the latest in factory automation. Although local plant management would continue to look for ways to improve efficiency, the major decisions affecting productivity were made at the time of the changeover. By contrast, a group problem-solving approach to plant management is based on the idea that much of the potential innovation in the production process is incremental, and that hundreds of small changes are more likely to improve efficiency and quality in the long run than are major changes introduced only every few years.

The preferred way to continually generate a substantial number of incremental innovations is to involve the workforce fully in the process. The ways in which worker involvement is encouraged varies among the vehicle companies. At Ford, a general employee involvement program has been established, and activities are under way at the Windsor Engine Plants #1 and #2, the Essex Engine Plant, the Windsor Casting Plant, and the National Parts Distribution Centre. In each plant teams of 9 to 15 hourly and salaried employees identify and resolve problems related to production quality, productivity, and health and safety.

Employee involvement programs are also in place at General Motors and Chrysler. In the 1982 contract negotiations, General Motors and the UAW agreed to establish JOBS (Joint Opportunities for Better Service) committees at the plant level that will seek to improve manufacturing quality and working group performance. Although these committees are at various stages of development, early results have been promising. Chrysler has also organized employee involvement programs in each of its plants. Their primary activity is to resolve quality-related problems but they also address health and safety issues, new model launch problems, and supplier problems, among others.

Adequate training is critical to the success of employee involvement programs. Unlike traditional training in the skilled automotive trades, this training is in areas like production engineering, problem analysis and group decision-making. Without the ability to analyze production problems, generate options, and arrive at consensus on a particular course of action, it is difficult, if not impossible, for employee involvement to succeed. Recognizing this, each company is providing extensive training in group problem-solving not only to hourly workers but to supervisory staff as well.

Chrysler is initiating 40-hour productivity improvement clinics in its plants, providing training in areas like group dynamics, brainstorming, cause and effect analysis, and consensus decision-making. Ford offers training for hourly workers in problem analysis and decision-making, engineering, and other related areas. At General Motors, problem-solving and team-building are being taught by a variety of techniques, including statistical process control training and others.

A SUSTAINED RESEARCH AND DEVELOPMENT COMMITMENT

The long-term strategy of the vehicle companies is to sustain an intensive research and development effort in order to become fully competitive in vehicle and production technology on a worldwide basis. Even in the depressed markets of the past few years, they have been reluctant to scale back research and development expenditures. Ford, for example, has continued to spend a greater proportion of its sales dollar (4.5-4.8% from 1980-82) on research and development than any of its major competitors in the world, even as it has sustained losses totalling more than $3 billion over the past three years. On a worldwide basis, the three major vehicle companies have invested approximately $5 billion a year in research and development every year since 1979. (See Table 5.1.) The magnitude of this investment is evident when compared with a total investment in research and development in the Canadian economy of only $4.4 billion in 1982.

Table 5.1
Research and Development Expenditures of Major Vehicle Companies
1978–1982
($ millions Canadian)

	1978		1979		1980		1981		1982	
	Expend.	As % of Sales	Expend.	As % of Sales	Expend.	As % of Sales	Expend.	As % of Sales	Expend.	As % of Sales
Ford	1,650	3.4%	2,010	4.0%	1,960	4.5%	2,050	4.5%	2,180	4.8%
General Motors	1,880	2.6%	2,280	2,9%	2,600	3.9%	2,700	3.6%	2,680	3.6%
Chrysler	390	2.5%	420	3.0%	320	3.0%	300	2.3%	380	3.0%
Total	3,900		4,710		4,880		5,050		5,240	

Source: Company Annual Reports and 10K filings.

In the thirty years preceding 1973, North American vehicle companies spent 3% of sales on research and development. In the same period, most European manufacturers spent a relatively larger percentage of sales (4 to 6%) on research and development; in fact, the European industry probably accounted for more than its share of major product innovations in the post-war era. European manufacturers have been facing increasing difficulties, however, in sustaining their research and development efforts at these levels. As a result, Volkswagen, Peugeot, Fiat, Renault, British Leyland and Volvo agreed in 1980 to conduct basic research on materials, alternative fuels and powertrains, and other areas on a joint basis.

By contrast, the Japanese industry devoted a very small percentage of sales to research and development before 1973, relying instead on American and European product developments and on American tooling technology. The major Japanese product innovations of this period were mainly the result of government emission control regulations. Innovation in the areas of components, materials, and electronics came largely through the research and development efforts of suppliers.

Recognizing the growing importance of vehicle technology in the new competitive environment, the Japanese vehicle manufacturers began to fund research and development on a much larger scale in the late 1970s.

The North American vehicle manufacturers' strategy is to sustain the current strong commitment to research and development in order to remain fully competitive, on a worldwide basis, in vehicle technology and production. The vehicle manufacturers also expect suppliers to participate in this strategy by increasing their research and development efforts.

THE MOVEMENT TO OUT-SOURCING

The North American vehicle companies have traditionally been characterized by a high degree of vertical integration. Until recently, purchased parts as a percentage of value added ranged from roughly 50% at General Motors to about 65% at Chrysler. This compares with outside purchases of 60 to 80% for the major Japanese companies. Given the significance of increasing capital demands, lower product costs and greater technological innovation in the competitive environment, the North American companies are beginning to question the wisdom of producing some components they currently make in-house and are looking for opportunities to purchase more components from outside suppliers, both in North America and abroad, if they have lower production costs or special technological capabilities.

Companies recognize that outside parts suppliers may have lower labour costs than they do and, in many cases, better economies of scale because of product specialization. As a result, they are inviting independent parts manufacturers to bid on work that was formerly done in-house. The companies are looking to both domestic suppliers and offshore manufacturers, particularly in low-wage countries like Mexico, Brazil, Korea and Taiwan. The Japanese and European automotive

firms, finding the export of finished vehicles more difficult under today's conditions, are also pursuing North American parts contracts. In addition to purchasing from foreign suppliers, the North American companies have built parts manufacturing facilities abroad where it is economical to do so or where governments have required them to manufacture as part of local content schemes.

The most prominent form of offshore sourcing has been the import of major powertrain components such as engines and transmissions. (See Table 5.2.) In some cases, offshore sourcing has been used to fill gaps in capacity. Chrysler, for instance, lacking the capital ($500 million per production line) and the lead time (five years for a completely new engine) necessary to produce the smaller engines required by its shift to smaller cars, initially sourced all their small car needs and still obtain some engines from overseas suppliers like Mitsubishi, Peugeot and Volkswagen. In other cases, offshore sourcing is a means of obtaining products like engines and transmissions from lower-wage countries. The three major vehicle companies are bringing engines into North America from their own subsidiaries in Latin America, partly to meet local content requirements governing the sale of vehicles in those countries. But in the long run, the vehicle companies expect that the lower wage rates will contribute to lowering the cost of these components.

The extent to which out-sourcing will become synonymous with offshore sourcing remains to be seen, but many estimates are for a dramatic increase. At present, about 5% of original equipment parts consumed in North America come from offshore. The general consensus in the industry is that offshore parts could claim as much as 15% of North American market by the late 1980s.[5] But one thing is clear: as out-sourcing results in offshore sourcing, the number of automotive jobs in North America will be reduced accordingly. Increased vehicle sales, however, could offset these lost jobs to some extent.

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5. See, for example, the second University of Michigan automotive industry Delphi Study, "U.S. Automotive Industry in the 1980s: A Domestic and Worldwide Perspective", July 1981.

Table 5.2

North American Offshore Engine and Transmission Sourcing by GM, Ford and Chrysler, 1982

Manufacturer	Products Sourced	Level of Imports	Countries of Manufacture
GM	Engines	143,000	Brazil (GM), Japan (Isuzu), Mexico (GM)
	Transmissions	222,500	France (GM), Japan, (Isuzu)
Ford	Engines	300,000	Japan (Toyo Kogyo), West Germany (Ford), Brazil (Ford)
	Transmissions	800,000	Mexico (Tremec), Japan (Toyo Kogyo), West Germany (Ford), France (Ford)
Chrysler	Engines	323,500	Mexico (Chrysler), Japan (Mitsubishi), West Germany (VW), France (Peugeot)
	Transmissions	—	—
TOTALS	Engines	766,500	From 5 countries
	Transmissions	1,022,500	From 4 countries

Source: GM, Ford and Chrysler.

LIMITATIONS ON THE STRATEGY

The strategy described in this chapter represents a concerted and sustained effort on the part of North American vehicle manufacturers to meet and overcome the challenges presented by the new competitive environment. But several factors will continue to impede their ability to do so unless ways can be found to reduce or neutralize their effects - and these are not factors that the companies themselves can control.

In Chapter 4 we noted the emerging significance of government policy in creating or regulating conditions in the automotive trade environment. As international competition has intensified, and as the manufacturing base has spread throughout the industrialized and into the less industrialized world, governments have responded with steps to preserve their domestic economies in general and with direct and indirect assistance to their automotive industries in particular.

This government involvement has taken several forms, including general automotive trade policies (quotas, tariffs, local content requirements and restraint agreements), favourable corporate tax systems, currency policies, loans and grants and, sometimes, equity participation, all of which we described in Chapter 4. Furthermore, some of these countries already enjoy the competitive advantages associated with lower labour costs.

The results are two-fold. Automotive industries in other countries are provided with a supportive environment within which to develop and grow. Secondly, when automotive products from those countries enter Canada, they do so with substantial competitive cost advantages over North American-produced products.

As we stated at the outset, these are advantages that the North American vehicle industry cannot overcome through productivity and cost improvements in their domestic operations. Unless steps are taken to mitigate this fact, the North American vehicle producers will see their market share eroded further and will be forced by competitive pressures to increase their own foreign sourcing. After examining the situation of the automotive parts industry in the next chapter, we will go on to recommend the steps that are necessary to ensure that the domestic industry is maintained and strengthened.

CHAPTER 6

THE AUTOMOTIVE PARTS INDUSTRY RESPONSE

The evolution of the North American motor vehicle industry has created both challenges and opportunites for the automotive parts industry. The concerted drive to achieve the highest possible levels of quality and productivity has led to fundamental and far-reaching changes in those companies that supply components to the motor vehicle assemblers just as it has prompted the vehicle manufacturers to revolutionize their in-house parts production systems. In some respects, the parts industry's response to these new pressures has been similar to that of the motor vehicle companies. The Canadian automotive parts industry is, however, made up of a significant number of diverse companies - diverse in terms of size, ownership, financial strength and technical capability. As a result, the opportunities open to parts companies, the strategies necessary to capitalize on them and the obstacles to be overcome in doing so are as diverse as the companies themselves.

Several general considerations do, however, apply. In this chapter we examine the response of the automotive parts manufacturers to the new competitive environment in terms of the following elements:

- The opportunities created by the new environment
- The emphasis on quality and productivity

- Meeting the technological challenge
- Building on existing strengths to capture the opportunities

THE OPPORTUNITIES IN INDEPENDENT PARTS PRODUCTION

The independent automotive parts industry is facing a combination of market forces that offer both threats and opportunities. The decline in vehicle sales and the growth in imports of parts and sub-assemblies from manufacturing facilities outside North America have led to a marked decline in parts production volumes in Canada and the U.S. But at the same time, the new approach of the vehicle manufacturers to outside sourcing and supplier consolidation is opening up opportunities for parts companies that can marshall the resources necessary to take advantage of them.

These opportunities are particularly important in view of concerns about Canada's large automotive parts trade deficit with the United States. Under the Auto Pact, vehicle assembly growth can in itself lead to an expanded captive parts deficit, as Canadian parts make up only a part of the value of the total vehicle assembled in Canada. The independent parts industry has grown along with the Canadian vehicle industry, but has never grown sufficiently to compensate for the relative lack of captive parts capacity in Canada. A unique opportunity that arises precisely because of the new competitive demands on the motor vehicle companies.

As we described in Chapter 5, the vehicle companies are, for a variety of reasons, looking to independent suppliers for parts they formerly produced in their in-house facilities. In addition, the trend toward sole-sourcing means that individual parts manufacturers that are able to win a dedicated supplier contract will have the opportunity

to obtain much greater economies of scale than were previously possible. The ensuing reduction of per unit costs that this would make possible can in turn allow a company to expand its sales to other North American or offshore vehicle companies.

This opportunity is, however, more than a simple matter of increasing production. Reflecting the situation in the vehicle companies, the requirements for successful competition for automotive parts manufacturers are also becoming much more rigorous. The new standards that vehicle companies are requiring in terms of quality and productivity will be difficult for many suppliers to achieve. The vehicle companies are also expecting suppliers to increase their involvement in research and development, placing an additional competitive requirement on many parts manufacturers that they have not had to meet before. Compounding the effects of these new pressures are rapid technological change in the industry and the premium that sole-sourcing places on competent parts marketing and liaison with vehicle company staffs, particularly in the engineering area.

Thus, the opportunities for expanding parts production that are currently available will be difficult to achieve - all the more so because offshore sourcing will likely increase. In many respects those parts companies that understand and are able to adapt most quickly to the new competitive requirements will be the firms that secure long term success. The goal of a Canadian strategy for the independent parts sector should be to ensure that as many as possible of these successful firms are in Canada.

THE EMPHASIS ON QUALITY AND PRODUCTIVITY

The observation that competitive survival in the automotive industry requires that companies achieve significant advances in product quality

and manufacturing productivity applies with as much force in the parts industry as it does in the vehicle companies. Quality is important not only because the vehicle companies are demanding it - and will be less and less willing to deal with suppliers that cannot provide it - but also because it can become part of a company's overall competitive strategy for expanding its market share.

Companies that are pursuing this quality advantage are doing so by adopting manufacturing systems based on the same principles as those being introduced by motor vehicle companies - statistical process control to eliminate defects in the manufacturing process instead of quality control inspection to catch defective parts; better product design to facilitate the manufacture of defect-free parts; and employee involvement in finding ways to improve quality.

One major multinational parts company has already trained 150 employees in statistical process control, and several have enlisted employee participation in evaluating manufacturing systems and identifying opportunities to improve quality. Some of the larger firms have had success with the "quality circles" concept pioneeered by Japanese manufacturers.

Smaller parts firms, too, are adopting statistical process control and are involving hourly workers in new efforts to prevent defects. Taken together, these efforts are producing results. In fact, several Canadian parts firms have become top performers in supplying the quality demanded by vehicle companies. The first winner of the Caterpillar Corporation's "Certified Supplier Award" for quality was Kendan Manufacturing Ltd., a Windsor-based supplier of precision-machined parts. One of the first winners of the Ford Motor Company's "Q1 Preferred Quality Award" was Woodbridge Foam Corporation of Woodbridge, Ontario. In each case, the winners of these awards were judged to have sufficient control of their own quality that in-plant inspections by the assemblers were no longer necessary.

Similarly successful strides are being made in the area of improving productivity. Tighter inventory control, reorganized work practices, and advanced manufacturing technology are all contributing to altering manufacturing techniques - to the benefit of productivity figures. In some areas, parts manufacturers are in the forefront of this type of innovation. Hayes-Dana, for example, developed a specialized robot welding system for its Barrie parts plant, and a second major multinational has substantially reduced inventories through the application of just-in-time production and purchasing. Smaller parts companies are also making noticeable advances and are proving that the potential to achieve significant productivity improvements applies equally well to small plants as well as large plants.

As vehicle assemblers trim their own inventories and tighten supplier links, these kinds of steps will become even more important. But efforts to improve productivity go far beyond control of inventory. Just-in-time production, reduced set-up times, better preventive maintenance, advanced manufacturing technology, employee involvement and similar techniques all offer significant opportunities to enhance performance. A medium-sized Canadian manufacturer of automotive electrical equipment has instituted statistical process control, improved its plant configuration to eliminate bottlenecks, cut overhead costs by reducing the number of foremen from one for every thirty workers to one for every sixty workers, and broadened the scope of individual jobs to include quality inspection and some machine maintenance. Quality and productivity have improved substantially, and this company's automotive sales are increasing at the rate of 50% a year.

MEETING THE TECHNOLOGICAL CHALLENGE

Survival in the current environment means acting quickly to meet demands for better product quality and manufacturing productivity. But surviving beyond the next few years will require concerted efforts

to meet the technological challenge created by market requirements and offshore competitors. Again, the successful response to this challenge will involve a broad definition of technological competence.

In the past, many parts companies were simply suppliers of low-cost manufacturing capacity to vehicle companies that designed the parts, provided the technology and established the specifications. Some of the larger parts companies have their own research and development programs, and this is going to become increasingly important as vehicle companies look to establish technology-based relationships with suppliers. Product innovation is one part of the requirement, including materials substitution, durability improvements and designs that facilitate lower cost, defect-free manufacture. But technological competence will also involve the ability to market successfully and to establish profitable connections with technical and engineering personnel at the vehicle companies.

This is why marketing, market intelligence and liaison with the vehicle companies are increasingly significant contributors to successful parts company strategies. Companies must be able to produce parts for today's vehicles while planning for production and developing or adapting the technology to produce parts that will meet needs five years from now.

Automotive parts manufacturers in Canada are responding to these kinds of technological challenges in a variety of ways. One large company has assigned customer responsibilities to its production engineers, thus strengthening the link between the design and production functions. In other firms, the engineering function has taken on importance and influence in corporate strategy and planning.

The success of these kinds of efforts is already showing up in technological innovations that parts manufacturers in Canada have introduced to meet marketplace requirements. Examples include the following:

- A Toronto electrical manufacturer is a leader in the development of surface mounted leadless components and a major exporter of monolytic and tantalum capacitors.

- In response to increasingly stringent noise regulations a Canadian manufacturer developed a muffler that reduces noise without sacrificing performance or increasing manufacturing costs.

- An Ontario manufacturer developed an asbestos-free brake pad with significant durability improvements after European countries legislated restrictions on the use of asbestos.

- With the vehicle companies looking for ways to reduce vehicle weight, an Ontario parts company developed a lighter, more durable foamed plastic body side moulding.

- A Canadian autmotive supplier was the first in North America to develop a non-metallic windshield wiper that offers cost reductions and weight savings and reduces scratching.

These examples give clear evidence of the technological effort under way in parts manufacturing in Canada and the innovative approaches adopted by some companies. But there are no guarantees that the Canadian parts industry has the technological capability that will be necessary in the future.

In describing the parts industry in Chapter 2, we noted the diversity among companies in terms of size, ownership, financial resources, and variety of product lines. This diversity is also apparent in the financial and human resources available to the companies for developing and pursuing technology-based strategies. With their access to extensive facilities for research and product development, the multinational parts companies in Canada will continue to draw upon corporate capabilities to achieve and sustain advances in such areas as material substitution, durability improvement, microelectronics and advanced manufacturing techniques. The multinationals have also been able to rely on sophisticated marketing systems and extensive distribution networks in North America and abroad. The larger Canadian companies are also expected to continue to show leadership to the Canadian industry with respect to the value of investing in applied research, development and marketing.

But with their smaller size and more limited resources, the key to success for most Canadian parts suppliers lies elsewhere. Even if they had the people and resources to sustain the research and development, very few would have sufficient resources to bring a major innovation to market. This is why they must identify the products or product lines that they can produce most efficiently and successfully and then build on these strengths by finding and adapting the best of existing product and process technology. This can mean licensing technologies from others, adapting technologies in related fields to automotive products, building advanced technology purchased from others into the product, or focusing on applications engineering such as adapting a standardized product to the special needs of certain vehicle companies.

We believe that Canadian automotive parts companies must increase their ability to find and license the technologies they need. Materials research is having an important effect on the weight and function of components, and parts manufacturers must adapt their products in the face of these technologically induced changes. Microelectronics

are having similarly significant effects, and suppliers must keep pace to hold their place in the industry. Within the manufacturing process, new technologies are continuing to be a significant competitive factor for the survival of automotive parts manufacturers. Acquiring the necessary technology in itself requires technological sophistication and is costly because preparatory investment in monitoring, negotiating and contracting is required before the technology can be utilized by the company. Although it is essential to a stronger automotive parts sector, technological licensing will not become the force it should unless direct program support and incentives are developed. **We therefore recommend:**

That the government introduce a technology licensing program in the automotive parts industry that provides the incentives necessary to expand the present level of activity significantly.

New technologies and opportunities can also be secured through business arrangements between firms with complementary interests. A motor vehicle company might undertake mutually beneficial partnerships to out-source the development of specific parts, or parts firms might combine complementary business strengths to introduce advanced technologies and pursue new markets. In some cases, joint ventures may prove beneficial between companies that offer necessary product technologies, such as microelectronics, and companies that have established positions in the industry.

Like technology licensing, technological joint ventures require incentives to encourage their presence in the Canadian automotive industry. At the same time, we are wary of suggesting that public capital be provided when private funding is available. Moreover, we would be equally concerned if the incentives funded foreign investment but did little or nothing to expand the technological capabilities of the domestic automotive parts industry. We therefore recommend:

That the government provide incentives to encourage joint ventures that transfer foreign technological capabilities to Canadian automotive parts manufacturers.

Recognizing also that technical personnel will be crucial to the success of technology licensing and development programs we are concerned that insufficient numbers of engineering and other technical personnel are currently employed in the independent automotive parts industry. **We therefore recommend:**

That incentives be created to encourage the development and expand the number of technical personnel in the independent Canadian parts industry.

BUILDING ON EXISTING STRENGTHS

Companies that meet the productivity, quality and technological challenges will still be faced with how to sustain their competitiveness over the long term. For most independent Canadian firms this will mean finding and defending a competitive niche with a product or product line that fills a market requirement but does so in a way that no other company can do - or can afford to do.

Canada already has several significant competitive advantages in pursuing an expanded independent parts sector. Labour costs in Canada are significantly lower than labour costs in the U.S., and they also compare favourably with West Germany and France. (See Figure 4.3.) The available workers are adequately skilled for parts production (which, in fact, requires a greater proportion of skilled workers than does vehicle assembly). Canada also has specific expertise in certain segments of the parts industry, expertise that can serve as a springboard to further development of those sectors.

Canada's strengths in original equipment parts production can be evaluated by analyzing U.S. import statistics. Sectors where Canada is the dominant importer into the U.S. indicate considerable production capabilities in Canada. Product lines where Canada captured more than 60% of the U.S. import market in 1982 include interior trim sealed beam headlights, radiators, wheels, springs and suspension parts, brakes and brake parts, and mufflers and tailpipes. (Canada accounts for about 20% of the overall U.S. parts import market.)

Table 6.1

Major U.S. Imports of Canadian Parts

Components	Canada's Share of Total U.S. Imports	
	1982	1978
Interior Trim	77.5	94.3
Sealed Beam Headlights	73.8	72.2
Radiators	69.9	84.0
Motor Vehicle Wheels	69.3	61.1
Springs & Levers for Suspensions	68.7	79.0
Brakes and Brake parts	68.5	78.6
Mufflers and Tailpipes	64.1	45.0
Glass	56.6	69.0
Fans & Blowers	48.5	81.2
Batteries	48.3	30.0
Pumps	42.1	N/A
Shock Absorbers	41.6	36.9
Bumpers	39.8	62.8

Source: U.S. Department of Commerce.

With these strengths in the industry as a whole, the key for parts companies is to discover how to turn the strengths into competitive advantages that will capture them a solid and growing share of a particular market. This could involve achieving plant scale or production runs much greater than the competition so as to reduce unit costs. Another technique would be to create a significant marketing and distribution presence in a particular region or part of the market - this is particularly appropriate in the aftermarket. Product or process innovations that are not easily copied are another means of establishing a company's competitive advantage.

Each segment of the parts industry will have a different combination of factors critical for success. The challenge for independent Canadian parts manufacturers is to understand the competitive factors in their niche and then to focus their resources on achieving unique advantages in those one or two factors in which they can sustain an advantage over other manufacturers.

Identifying and defining these niches can be a costly business. To do so will require manufacturing scale, well-developed market intelligence and effective marketing relationships with vehicle companies, and new product and process innovation. A few independent companies have the means to do so, but the vastly more numerous smaller firms have rarely been able to do so. They have faced several impediments.

The main impediments to securing greater scale are two-fold. In the first place greater scale must usually be built on a large domestic base of sales. In many parts market segments the North American market has been fragmented, creating a situation where a number of suppliers bidding against each other tended to hold prices down. In the long run, however, market fragmentation is often inefficient, and the vehicle companies have come to believe that there are productivity and quality advantages to be gained

from moving toward fewer suppliers. Thus, the impediment of a fragmented North American market for many parts may be disappearing. In order to capitalize on this, however, a second impediment must be overcome, and that is to secure adequate investment capital to move to world-scale production facilities. Many Canadian-owned parts firms find themselves constrained by this impediment, even as new market opportunities are opening up.

Capital investment in the Canadian independent automotive parts industry outpaced investment in captive Canadian parts facilities by the Big Four vehicle companies throughout most of the 1970s. In recent years, however, this trend has been sharply reversed as Ford built a major engine plant and General Motors expanded and modernized a transmission factory. (See Table 6.2.) The financial resources of the vehicle companies allowed them to complete these facilities despite the severe financial costs imposed by the sharp downturn in vehicle sales. On the other hand, some independent parts companies with fewer resources to draw upon have had to scale back their investment plans since the automotive recession started. (See Table 6.2.) Unless more independent parts manufacturers find ways to finance expanded capacity, many of the opportunities currently before the industry may go unrealized.

Table 6.2

Capital and Repair Expenditures* For Auto Parts Plants by the Big Four and Independent Producers
($ millions)

	Big Four Expenditures	Independent Producers' Expenditures	Total	Independent Producers' Share of Total
1972	57.2	63.4	120.6	52.6%
1973	62.8	97.2	160.0	60.8%
1974	61.1	141.8	202.9	69.9%
1975	49.2	106.2	155.4	68.3%
1976	72.7	97.7	170.4	57.3%
1977	127.5	118.8	246.3	48.2%
1978	150.8	213.5	364.3	58.6%
1979	287.6	246.6	534.2	46.2%
1980	769.6	165.8	935.4	17.7%
1981	710.8	160.5	871.3	18.4%
1982	202.5	150.2	352.7	42.6%

* Some special tooling and other expenditures are not included in these categories.

Source: Special Statistics Canada tabulations prepared for the Task Force using SIC 325, Motor Vehicle Parts and Accessories, and SIC 188, Automobile Fabric Accessories.

The main impediment to effective marketing and distribution for Canadian-owned firms has always been gaining sufficient access to the integrated supply systems of the major vehicle companies. To be effective marketing must begin with close and continuing liaison with the design and engineering staffs of the vehicle companies. New model changes must be anticipated and planned for. Market intelligence must be capable of identifying new product opportunities and

securing early access to product development. The Auto Pact through the Canadian value added safeguards has secured a certain degree of marketing access for Canadian companies with the major U.S. vehicle companies. Even so, it remains difficult for Canadian-owned parts firms to afford the investment necessary for an effective marketing effort. Particularly difficult to sustain are marketing efforts directed at non-Auto Pact manufacturers, who have not made commitments to achieving Canadian value added.

Recognizing the importance of obtaining expert assistance in implementing many of these strategies, the Automotive Parts Manufacturers' Association joined with the Government of Ontario to create an Automotive Parts Technology Centre. The Centre, which opened in December 1982, will have programs to assist parts manufacturers in introducing statistical process control, improving productivity, finding and carrying out technological innovation, and expanding export market opportunities. The parts industry has taken an active role in designing and carrying out the Centre's early program activities, and the intent of the industry is to maintain the Centre as an industry-run organization.

The Centre is one response to the industry's needs - so are the technological recommendations we have made - but other steps are needed, particularly as regards market access. At present, no parts company, regardless of size or strength or resources, has succeeded in capturing a significant share of the parts business for cars being imported to North America. A method of securing greater market success is thus of primary importance in steps to support automotive parts industry strategies. In Chapter 7 we describe how this greater market access can be achieved.

Whatever additional assistance is provided should be focused on those niches where Canadian parts firms have demonstrated capability and effective strategies. Moreover, such assistance should be targeted toward those areas of maximum cost leverage in each business. In

some businesses that will be manufacturing scale; in others it might be marketing or product innovation. Focusing this assistance effectively will require greater analysis and understanding of the parts sector than has been available to date. **We therefore recommend**:

> **That government, in cooperation with the industry, conduct a thorough and careful analysis of the opportunities for expanded automotive parts production in Canada and that particular products with strong potential for greater Canadian manufacturing be identified.**

The opportunity to expand the Canadian independent parts sector is not likely to remain open for long. It is a uniquely turbulent time in the North American and world vehicle industries, and the opportunities this turbulence creates will be transitory. We must capitalize on them now, or companies in the United States, Japan, Europe and elsewhere will certainly do so before we can. In the next two chapters we recommend a trade policy framework and supporting policy and program measures that, taken together with the recommendations in this chapter, can ensure that the Canadian opportunity in vehicle and captive parts manufacturing and the equally significant opportunity in independent parts production will be realized.

CHAPTER 7

A NEW AUTOMOTIVE TRADE POLICY FRAMEWORK

The current crisis in the North American automotive industry must not be allowed to obsure the fact that today's competitive environment presents Canada with a major opportunity to increase its production of automotive products and expand employment in the industry. The response of the Canadian automotive companies discussed in Chapters 5 and 6 demonstrates that the new competitive environment holds opportunities for innovative North American businesses even as it threatens the survival of others. If management, labour and government in Canada adopt a concerted and mutually supportive approach to take advantage of the competitive opportunities currently available, the present difficulties in the industry could readily give way to renewed industrial growth in the automotive sector.

The motor vehicle and parts companies have already responded to these competitive opportunities. They have made significant investments in new plant and equipment, developed new products, and are in the process of making major changes to their manufacturing systems to boost productivity and quality. But as we have made clear, there are limits to how far these new investments and innovations can take the industry in the absence of a new trade policy environment.

From the point of view of the motor vehicle companies, the productivity gap with the Japanese can be narrowed, but other elements of the Japanese cost advantage, such as lower wages and currency exchange rates, are significant competitive factors beyond the control of the vehicle companies. Similarly, the parts industry can improve its productivity, manufacturing quality, and technological capabilities but will still find access to markets outside North America severely limited by the buying policies of the major foreign vehicle companies, which favour local parts producers. Moreover, government measures in some countries are influencing vehicle companies to consider countries with local content requirements when looking to buy or make parts abroad.

Given these competitive realities, the Task Force believes that the foundation of a cooperative and successful Canadian automotive strategy must be a new automotive trade policy framework. The present trade policy framework, with the Auto Pact as its centrepiece, has served Canada's interests over the past twenty years, but a trade policy based on the Auto Pact alone is inappropriate to the new circumstances confronting the Canadian automotive industry. In this chapter we describe the shortcomings of the present trade policy, propose a new trade policy framework, and discuss the potential benefits to Canada of the new trade policy.

THE SHORTCOMINGS OF THE PRESENT TRADE FRAMEWORK

Canada has certain characteristics that make it logical for vehicle and parts manufacturing businesses to locate here. We have the world's seventh largest market for vehicles and, in earlier years, had an even higher ranking.[1] We have in abundance the raw materials essential to the industry, as well as very efficient feeder industries in materials processing and semi-finished goods such as steel, petrochemicals, and

1. Canada was the world's second largest national market in 1950 and the fifth largest in 1960.

metal rolling and extruding. Most important, Canada has a skilled labour force and competitive labour costs relative to many industrialized nations. Canada's transportation infrastructure and service systems are also well equipped to handle the requirements of automotive manufacturing, and our major industries are close to major automotive production centres in Michigan and other states. In short, Canada provides a competitive environment and a substantial market on which to base an automotive manufacturing industry.

The world motor vehicle industry is generally dominated by a dozen or so major companies based in a few countries. With the exception of most North American companies, which have traditionally located production facilities in every major market where they sell vehicles, these companies have preferred to serve foreign markets from a domestic base. There are several reasons for this. First, the automotive industry is highly integrated, and a significant amount of design and manufacturing coordination must take place between vehicle companies and parts suppliers. Given the need for close coordination, the traditional preference of vehicle companies has been to use suppliers in the same country and often in geographical proximity. Moreover, foreign manufacturing requires managing factories under different laws and in unfamiliar labour and business climates, thus increasing the risks associated with investing aborad. Also, there is a natural desire on the part of vehicle companies to reward the workforce of the home country with any increased volume, and this is reinforced by political pressures to maintain employment at home.

This is the source of Canada's automotive dilemma. We have a large vehicle market and a manufacturing environment that is internationally competitive, but this is not enough to ensure that automotive manufacturing will take place in our country, because many vehicle companies prefer to serve foreign markets from their domestic factories. The efforts of other countries to create local industries behind tariff barriers or through local content schemes have only aggravated this dilemma as increasing amounts of world capacity are drawn to those countries.

Canada's first response to the dilemma was a high tariff régime that lasted for almost fifty years. As we discussed in Chapter 2, that régime secured a domestic industry but at the price of an inefficient branch plant structure. The Auto Pact in 1965 marked an abrupt break with the high tariff era and resulted in a truly creative solution to the Canadian dilemma. Automotive manufacturing in Canada commensurate with the size of the market was secured through the Auto Pact and the letters of undertaking with the major vehicle companies. At the same time, the Auto Pact and the letters of undertaking with the major vehicle companies. At the same time, the Auto Pact created a conditional duty-free environment between the U.S. and Canada, allowing the entire North American industry to rationalize according to appropriate economies of scale. The result has been an efficient domestic industry serving an integrated North American market.

The integrity of the industry thus created is now threatened. The Auto Pact safeguards and the letters of undertaking with the vehicle companies committed the companies to manufacturing vehicles in Canada with a dollar value at least equal to the dollar value of their sales in Canada and to achieving Canadian value added equal to roughly 60% of their cost of sales in Canada. At the time of the Auto Pact, the U.S. vehicle companies dominated the North American market, and thus it was Canada's expectation that the Auto Pact safeguards would cover most of the Canadian market. But as offshore imports have climbed to 30% of the Canadian market, the coverage provided by the Auto Pact safeguards has declined substantially.

Whereas Canadians previously could expect that the dollar value of vehicle production in Canada would approximately equal the dollar value of consumption, now Canadian vehicle production need only be 70% of consumption because imports hold 30% of the market. Similarly, when the Auto Pact producers held most of the market the Canadian value added in automotive manufacturing had to be 50-60% of the value of sales. Now, with 25-30% of the market held by companies that have no CVA commitments, the overall level of CVA need only be roughly 35-45% of the value of all Canadian sales.[2]

2. Calculated by applying the 50-60% CVA commitment to only 70-75% of the market.

In short, the assurance of Canadian automotive production afforded by the Auto Pact and the accompanying letters of undertaking has declined in direct proportion to the level of import penetration in the market.

The safeguard provisions of the Auto Pact have been slowly eroded from another direction as well. At the time the Pact was signed in 1965, the level of Canadian duty on automotive product imports was 17.5% or higher. By 1983 the duty had declined to 12.1% and by 1987 it will fall to 9.2%. Duty-free access to the Canadian market was a major incentive in the Auto Pact for the U.S. vehicle companies to participate in it. They anticipated that the significant investment they would have to make in new Canadian facilities would be more than offset by the long-run advantages of a rationalized North American industry, the competitiveness of the Canadian environment, and the cost advantage they would have over offshore imports due to the duty-free provisions of the Pact. The vehicle companies have continued to invest in Canada, but over the last 15 years they have seen the duty advantage that the Auto Pact provides shrink from 17.5% to 12.1%. From their perspective, the benefits of Auto Pact participation have clearly declined since the treaty was signed.

For all these reasons, the present trade policy framework is no longer appropriate to the changed market circumstances in which Canada finds itself today. Imports, particularly from Japan, have taken 30% of the market, and these importers are not required to manufacture or purchase automotive products in Canada. Given the propensity of these vehicle companies to manufacture in their home countries, Canada cannot expect them to take advantage of our competitive environment to build or buy products here in other than token quantities. The Auto Pact and the letters of undertaking with the participating vehicle companies will ensure that some automotive manufacturing continues to take place in Canada, but in a real sense the Canadian automotive dilemma has returned. How can Canada, with its competitive manufacturing environment and large market, ensure that vehicle and parts production commensurate with the size of that market takes place here. In the

pages that follow, the Task Force proposes a new trade policy framework that we believe will resolve this dilemma in a manner that will benefit not only Canada's automotive industry but its entire economy.

THE PROPOSED AUTOMOTIVE TRADE POLICY FRAMEWORK

The trade policy framework was the most difficult issue facing the Task Force. As we have made clear in this report the international competitive environment has changed, and some of the assumptions upon which Canada's previous automotive trade policy régime rested are no longer valid. But this is not to say that our recommendation of a new trade policy framework is aimed solely at meeting the requirements of the current environment.

By building on the principles that were established under the Auto Pact, by learning what we can from the experience of other countries' trade policies and practices, and by recognizing the strengths of the Canadian automotive sector, we have aimed at defining a long-lasting trade policy framework, one that will serve not only to assist in maintaining a healthy industry in the turbulent period immediately ahead, but also in the much longer term.

The Task Force recommends to the Government of Canada the following automotive trade policy framework:

> **The Canada-United States Automotive Products Trade Agreement (APTA) established the fundamental policy that automotive companies that participate in the Canadian market invest, provide employment, and create value within that market commensurate with the benefit they derive from it. The signatories to the undertakings that accompanied the Agreement have pursued the terms, conditions and commitments relating to the APTA. However, participation in the Canadian market has changed since the APTA was legislated, and the intent of the APTA is no longer being upheld by all those selling in the market.**

The Task Force therefore recommends that the Government of Canada pursue a trade policy that will require all vehicle manufacturers who sell vehicles in the Canadian market to make binding commitments comparable to the commitments now being made by the vehicle manufacturers operating under the APTA.

A step by step arrangement and an effective compliance procedure must be developed by the Canadian government that will ensure that these comparable commitments will be fulfilled by 1987.

For those vehicle companies already manufacturing in Canada under the APTA, the existing compliance procedure will remain in effect. However, once a comparability of commitment has been achieved by all vehicle manufacturers selling in Canada, then the Government of Canada should negotiate an agreement with all vehicle companies to increase the level of minimum commitments to the Canadian economy.

As part of this new trade policy, incentives should be established to encourage the further development and expansion of a world-competitive indigenous Canadian automotive parts industry.

This trade policy framework reflects the fact that the Canadian market has changed radically since the signing of the Auto Pact and that new mechanisms are required to ensure a continued high level of domestic automotive activity in the future. The Task Force believes that the fairest and firmest way of achieving this goal is to extend the Auto Pact objectives that require investment in Canadian manufacturing and the purchase of Canadian parts in return for duty-free access to the market to all vehicle companies selling in the Canadian market. Under our automotive trade policy proposal, all vehicle companies would, over time, make the same commitments to the Canadian economy as those who are now producing and assembling vehicles in Canada.

Within the policy framework we have recommended, the Task Force proposes that importers be given several years in which to raise their level of commitment to Auto Pact levels, but this transition period should be completed no later than 1987. Once the new commitments are accomplished, the government should commence negotiations with all vehicle companies selling in the Canadian market to increase the level of minimum commitments to the Canadian economy. These negotiations should develop the detail for the framework we have recommended for the future of the industry in Canada.

The Task Force strongly recommends that until such time as the government is able to implement the proposed trade policy framework, the current voluntary restraint arrangement with the Japanese producers should be strengthened and continued. The current arrangements expire on June 30, 1983, and it is highly unlikely that the government could put a new trade policy framework in place by then. The voluntary restraint, while it has not reduced the Japanese market share, has at least given the industry some breathing space to introduce new products, continue its major retooling program, and implement new production techniques aimed at reducing manufacturing costs and improving productivity and quality. In the following section we present an example of how the new requirements for importers could be structured and how they might be phased in.

AN EXAMPLE FOR IMPLEMENTING THE TRADE POLICY FRAMEWORK

Whatever program the govenment adopts for implementing the proposed trade policy framework will have to address several key areas. It will have to incorporate staged requirements to allow overseas vehicle makers a reasonable period of time within which to make the necessary investments. The program will also have to include a duty reduction scheme appropriate to the new framework, special provisions to accomodate small volume vehicle manufacturers, and specific enforcement mechanisms.

By model year 1987, the structure of the requirements on importers might look like this:

MODEL YEAR 1987 REQUIREMENTS

FOR IMPLEMENTATING THE TRADE POLICY FRAMEWORK

Level of Vehicle Sales in Canada	Requirements
0-3,000 units	Duty as applicable.
3,001-28,000 units	Necessary commitment is 10% CVA to cost of sales ratio plus 2% CVA to cost of sales for each 1,000 sales in excess of 3,000 or Auto Pact commitments (i.e., a vehicle production to sales ratio and CVA of 60%)
28,000 or more units	Entry conditional on negotiations with government to establish commitments comparable to the Auto Pact commitments. This would include vehicle production to sales ratios and CVA.

Under this kind of structure, the relevant commitment for companies with lower levels of vehicle sales (3,001-28,000 units) would be Canadian value added (CVA). These companies would have the duty on their vehicle imports reduced proportionately as their level of CVA increased; if they reached 85% CVA, they would enjoy duty-free entry.

For companies with vehicle sales of 28,001 or more, the relevant commitment would be comparable to the Auto Pact. Once they had negotiated commitments with the government comparable to the commitments of those companies now participating in the Pact, they too would gain duty-free entry.

Although the intent of the measures to implement the trade policy framework is to require that overseas producers make job commitments to Canada commensurate with their vehicle sales here, the Task Force recognizes that this will need to be done in stages over a reasonable period of time. This could be accomplished as follows:

TRANSITION REQUIREMENTS TO MODEL YEAR 1987

Level of Vehicle Sales in Canada	Requirements
0-3,000 units	Duty as applicable.
3,001 or more units	Continued overall voluntary restraint limits on Japanese exports to Canada plus phase-in of CVA to 60% level: MY 1985: 10% CVA plus ½% for each 1,000 sales in excess of 3,000. MY 1986: 10% CVA plus 1% for each 1,000 sales in excess of 3,000. All companies will continue to have the option of meeting the Auto Pact commitments in place of the above.

As noted, any overseas producer would be able to opt for participation in the Auto Pact as an alternative to meeting these requirements between now and 1987. Furthermore, any arrangements to give effect to the new trade policy framework should in no way disadvantage vehicle manufacturers now assembling in Canada under the Auto Pact, particularly small volume vehicle producers.

After 1987, the intent of the Auto Pact - duty-free flow of parts and vehicles in the accepted context of necessary safeguards for Canada's automotive industry - will be maintained. Once a comparability of commitment has been achieved by all vehicle manufacturers selling in Canada, the government should negotiate agreements with all vehicle companies to increase the levels of minimum commitment to the Canadian economy and to make the administration of ratio requirements more flexible.

EMPLOYMENT BENEFITS TO CANADA

The employment benefits flowing from implementation of the recommended trade policy framework include the direct employment benefits to Canada arising from requiring all vehicle importers to manufacture in Canada and purchase Canadian-made automotive parts, the continuation of the present employment intentions of existing manufacturers, and the widespread indirect employment benefits that will occur throughout the economy.

1. If the vehicle importers were required to achieve Canadian value added equal to 60% of their $1.45 billion in 1981 imports,[3] then an additional $870 million of CVA would be added to the Canadian economy. This translates into almost 21,000 jobs in Canadian vehicle manufacturing and automotive parts.[4]

3. 1981 was used as the base year for the calculation as it is the most recent year for which a complete set of data is available.

4. The job estimate was derived by dividing the $870 million in additional CVA by the average value added per employee in the motor vehicle and parts manufacturing industries (SIC 323, 325 and 188), which in 1981 was $42,300.

2. If the automotive trade policy framework is not adopted, competitive pressures could well force existing CVA levels of the North American manufacturers to decline to the minimum commitment level of 60%. As the information in this report has shown, CVA levels have averaged well above this level and, since the inception of the Auto Pact and with the integration of the North American industry, CVA has averaged 74%. A decline in CVA to the 60% level would mean a permenant loss of over 22,000 jobs[5] in the Canadian automotive industry.

It is therefore anticipated that the recommended trade policy would create and maintain at least 43,000 jobs in the automotive sector. If we allow for market growth projections and productivity improvements,[6] this total of 43,000 jobs could be reduced to about 38,000 by 1987. Based on this estimate, the jobs created in those other industries that directly supply the automotive industry, such as steel, aluminum, plastics and rubber, could amount to an additional 43,000 jobs. The total employment effect of this trade policy proposal could therefore be more than 80,000 jobs. This calculation excludes the additional indirect employment effects through the economy, which could produce the equivalent of nearly another 50,000 jobs.[7] Thus the difference between maintaining the status quo and implementing the trade policy framework we have recommended could be 130,000 jobs in Canada - about half of which could be new employment created in both the automotive industry and many other sectors of the economy.

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5. In 1981, 62% CVA for North American manufacturers led to 100,000 jobs. On this basis, 60% CVA would mean about 97,000 jobs and 74% CVA would mean about 119,000 jobs or a difference of 22,000 jobs. This estimate is based on the assumption that the level of market penetration by all sellers remains unchanged from 1981 levels.

6. Based on trend volume projections of approximately 2½% annual growth rates, it is assumed that motor vehicles sales in 1987 would reach the 1979 level. It is also assumed that productivity growth would average 5% annually in the 1981-87 period.

7. Based on multipliers used in Statistics Canada 1978 national input/output closed and open models. The open model takes account of all supplier inputs to the automotive sector and uses a multiplier of 1.136. The closed model takes into account all upstream factors and, in addition, the income spent by workers, interest and dividends paid to shareholders and the net income of unincorporated businesses and uses an additional multiplier of 1.3.

These additional jobs could be created in communities across the country. Prime beneficiaries would be the important supplier industries discussed in Chapter 1, but even relatively unrelated industries such as agriculture, forestry, oil and gas, and insurance would benefit due to the increase in purchasing by the automotive industry, its suppliers and the employees of both. As we also showed in Chapter 1, thousands of these new jobs would be created in small businesses as well as in the plants and offices of major corporations.

Moreover, much of the increased Canadian manufacturing that would result from the proposed trade policy would be likely to come in the independent automotive parts industry as offshore vehicle companies purchase Canadian parts to meet the new trade requirements. The greater production scale that these purchases will make possible should lead to lower manufacturing costs in the independent parts industry, thus offering the potential for Canadian parts companies to secure an even larger share of the parts purchases of the North American vehicle companies and the growing business in the aftermarket. Employment in the parts industry might then rise far beyond the estimates suggested by applying the proposed trade policy to importers not currently participating in the Auto Pact.

In addition to the employment and investment the proposed trade framework would generate by requiring non-Auto Pact vehicle importers to manufacture and buy parts in Canada, there is the potential for even greater employment and investment once a comparability of commitment to Canadian manufacturing has been achieved by all vehicle companies selling in Canada. We have recommended that once that comparable level of commitment is achieved, the government of Canada should negotiate an agreement with all vehicle companies to increase the level of minimum commitments to the Canadian economy. Those negotiations hold the potential for further increases in jobs and investment in the automotive industry, in ancillary industries, and throughout the Canadian economy.

TRADE CONSIDERATIONS

In recommending an automotive trade policy framework, the Task Force has been conscious of Canada's international obligations and of our relations with our trade partners. These are governed principally by the General Agreement on Tariffs and Trade (GATT) and, of course, the Auto Pact. We believe that the proposed trade policy framework can be implemented without prejudicing any of our current trade obligations. In fact, we would suggest that some of the trade agreements Canada is party to offer a more than adequate rationale for implementing the new automotive trade framework.

It would appear, for example, that under Article 19 of the GATT Canada has the right to take restrictive action against automotive imports if injury is resulting. In particular it would appear that the Canadian government could have invoked Article 19 against vehicle imports from Japan. The Task Force is not recommending such an approach, but it is an alternative open to Canada and supports our view that the trade policy framework we have proposed is necessary to rectify the injury that excessive imports are causing to our automotive industry.

Instead of retaliatory action under GATT, the Task Force is proposing a non-discriminatory trade policy framework that requires all vehicle companies selling in Canada to make similar commitments to Canadian jobs and investment. Despite the fact that the trade policy framework we are proposing is non-discriminatory, the Japanese vehicle companies may argue that because they are the major importers not participating in the Auto Pact, they are being singled out. The Task Force has given serious consideration to this possibility and would offer the following observations, which could be used in arguments under the GATT if Japan should go so far as to file a complaint:

1. Japan has an inconsistent trade policy in regard to export restraints. It is inconsistent because although Japan has accepted, and in some cases negotiated, major limitations on its automotive exports to other countries, it has been unwilling to restrain exports to Canada to any more than a minimal volume for a very short period. For example, Japan and the U.K. agreed that Japanese exports would not exceed 11% of the U.K. vehicle market. In West Germany an informal agreement keeps the Japanese market share at 10%. The French government declared, and Japan apparently acceded to the demand, that Japanese imports would not surpass 3% of the French market. This contrasts with the approach to the Canadian market where, after long and protracted negotiations, Japanese imports still account for almost a quarter of the market. This discrimination seems to be a violation of Article 1 of GATT, the Most Favoured Nation Clause, under which all countries with Most Favoured Nation status are to be treated equally.

2. Moreover, If Japan were to threaten retaliation in other trade areas because of our proposed automotive trade policy framework, Canada would have a strong case for claiming discriminatory treatment. Japan has not retaliated against any European, South American, Southeast Asian, or other producing country for the imposition of quotas or local content schemes, most of which are far more restrictive than what we are proposing. To single out Canada for retaliation would again be a violation of our Most Favoured Nation status.

3. A serious consequence of Japan's willingness to restrain exports to Europe is "diversion" - that is, if exports of Japanese cars to Western Europe were not restrained, allowing them to achieve penetration levels similar to those they enjoy in Canada, there would be substantially fewer Japanese cars flooding the Canadian market. This diversion of vehicles could also be grounds for a Canadian complaint under GATT.

4. Many automotive companies have located manufacturing facilities in the countries where they do business around the world, providing jobs and contributing to the local economy. But even though the Japanese vehicle companies export $1.3 billion worth of vehicles and parts to Canada each year, they have made only minimal attempts to invest or purchase parts here. The only Japanese automotive investment of any note is the announcement of a Toyota wheel plant employing 100 people to be built in British Columbia - and even this is with subsidies from the federal and B.C. governments. In 1982, Japan purchased only $10 million worth of auto parts from Canadian sources, a figure that is $1 million lower now than it was four years ago. This is despite the fact that, in connection with its voluntary restraint arrangements with Canada, Japan promised "industrial cooperation" and more parts sourcing here. By contrast, Japanese manufacturing activities in the U.S. and other foreign markets are relatively widespread. Further, these activities are not confined to large-volume operations. The Japanese automotive companies have either wholly-owned or joint venture assembly or component operations of relatively small size in Australia, Brazil, Egypt, India, Indonesia, Italy, Malaysia, Nigeria, Peru, South Africa, South Korea, Spain, Thailand and Zimbabwe.

In short, the Task Force believes that Canada has sound arguments and international precedent on its side in introducing the new trade policy framework we propose. The Japanese and, indeed, all other vehicle producers in the world have long accepted that individual countries would impose local content requirements on them. The framework we are proposing for Canada is mild by international standards, and the vehicle companies of the world have not seriously protested the much more stringent schemes in other countries.

THE CONSUMER INTEREST

In addition to the trade implications of the new policy framework, the Task Force has also been conscious of potential concerns that the trade policy framework might pose for Canadian consumers. We believe that the Canadian automotive marketplace will continue to be, as it has been in the past, a highly competitive pricing environment. In addition, consumers will continue to benefit from the increased emphasis on product quality and service.

Recent statements about probable vehicle price increases arising from a new automotive trade policy framework have no basis in fact and are not borne out by experience in today's marketplace. Canada's current experience with the voluntary export restraint/arrangements agreed to by Japan supports these observations. Since June 1981, when the import restraint arrangement with Japan was first announced, the Statistics Canada price index for all passenger cars has increased at an annualized rate of only 3.6%.[8] Over the same period the Canadian consumer price index increased at an annualized rate of 8.4%.[9]

The voluntary reductions of 12 to 15% from the previous levels of Japanese imports have exerted no apparent upward pressure on car prices because the Canadian car market is fiercely competitive with or without current levels of Japanese imports. As we noted in Chapter 2, the 1982 factory list price of a typical sub-compact sedan was 8.8% less in Canada than in the U.S. The price advantage in Canada on large models is equally significant. A typical four-door sedan cost 8.9% less in Canada than in the U.S. in 1982, and the 1982 price of a typical larger two-door sedan was 6.9% less in Canada

8. Calculated from Statistics Canada monthly automotive equipment price index for June 1981 to February 1983 inclusive.
9. Calculated from Statistics Canada monthly consumer price index for June 1981 to February 1983 inclusive.

than in the U.S.[10] (All of these comparisons are before sales taxes and reflect adjustments for exchange rates. Canadian consumers may not realize that they are benefiting from lower prices in Canada because of sales tax and exchange rate differences.) Moreover, not only does the Canadian vehicle market offer lower prices in relation to the U.S., but North American prices are generally lower than prices in most other countries in the world.[11]

It is important to note that these lower prices apply even in those segments of the market, such as full-size sedans, where Japanese imports do not compete. The conclusion is that the Canadian market would continue to be highly competitive even if there were no offshore imports at all.

The other worry that consumers might have is that freedom of choice could be reduced under the proposed trade policy framework. Naturally, if all vehicle producers in the market elected to meet the manufacturing commitments in the framework, the range of vehicles available in Canada would not decline. Moreover, the Task Force would urge the government to be flexible with regard to smaller importers. In our example for implementing the trade policy, we have suggested that all importers bringing in fewer than 3,000 vehicles should be exempted from the new trade policy requirements. If the proposed trade policy framework is applied with such consideration for smaller importers, extensive freedom of choice for the Canadian consumer will continue to be a dominant feature of the market. Further, those suppliers that choose not to sell will do so because they choose not to invest in Canada.

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10. "Sixteenth Annual Report of the President to the Congress on the Operation of the Automotive Products Trade Act of 1965".
11. See, for example, Union Bank of Switzerland, "Prices and Earnings Around the Globe", 1982.

NEED FOR SUPPORTING MEASURES

The framework recommended by the Task Force to govern Canada's automotive trade policy in the coming years provides the only clear way for the Canadian government to meet the current automotive crisis. It is the one alternative that the government of Canada can implement unilaterally, because it represents a non-discriminatory extension of an existing policy brought up to date to reflect existing economic and market conditions.

The Task Force proposals will be beneficial not only in and of themselves - providing jobs and value added in the assembly and parts industry as well as in ancillary industries and the economy at large - but as part of a broader automotive strategy, elements of which we describe in the next chapter.

CHAPTER 8

A SUPPORTIVE AUTOMOTIVE POLICY ENVIRONMENT

The trade policy framework set out in the previous chapter establishes the principles and approach upon which to base a continuing viable automotive industry in this country. But the policy framework by itself is not enough. As the Task Force has documented in this report, the world automotive industry is in a state of change; new competitive standards are evolving that will affect the future performance and structure of the Canadian industry. And although change always exposes areas of vulnerability, it also creates opportunity. As a result, the motor vehicle and automotive parts industry in Canada must pursue the appropriate policy course, take the necessary strategic actions, and make the investments required to ensure that the industry will continue to be a vital part of Canada's economic base. These efforts in turn must be supported by the creation of a dynamic and healthy business environment for the industry. In this chapter we examine the measures that, together with the recommended trade policy framework, should serve to provide that environment. They include the following:

- A sound labour/management climate
- Tax and tariff issues
- Transitional assistance for the industry and labour
- Human resource development
- Continued consultation

A SOUND LABOUR/ MANAGEMENT CLIMATE

Discussions about the state of labour-management relations in Canada too often focus on foreign panaceas, overlooking the basic strengths of the domestic automotive industry. Canada is not Sweden, Canada is not West Germany, and Canada is not likely to become Japan. Although developments elsewhere in the world deserve full consideration, Canadian culture and values must be kept in mind; we are seeking ways to improve on a Canadian model, not to transpose isolated pieces of other systems into the Canadian labour-management environment without recognizing their context and interdependencies in other cultures.

Canada's automotive industry now enjoys a sound labour-management climate. The labour movement has participated in charting many of the policies and programs that guide the industry. This Task Force has been only one example. Moreover, the United Auto Workers in Canada have supported developments in the industry that will ensure its long-term viability. We have elaborated on many aspects of this support throughout the report. The UAW has accepted new technology in the manufacture of motor vehicles and automotive parts. Productivity, quality of production, labour costs and absenteeism in Canadian plants compare favourably with conditions in plants in the United States, Europe, Australia and any Third World country where vehicles are produced. And, as we indicated in Chapter 5, labour and management are involved in a number of programs and initiatives that will contribute to maintaining the current labour-management climate.

Looking ahead to the transition taking place in the Canadian automotive industry, the Task Force believes that labour and management will continue to work together to achieve the desired results. For the United Auto Workers of Canada, this means:

> **We will continue to represent workers in their concerns about income and job security and their need for valued employment. Within these parameters, the Union will continue to support the introduction of new technology, the steady improvement of the quality of the product, and the social and economic importance of producing good products at prices consumers can afford.**

For the manufacturers of motor vehicles and automotive parts in Canada, this means:

> **We will continue to pursue our competitive requirements and meet our profit and corporate responsibilities. Within these parameters, as manufacturers we will continue to work with labour at all levels to improve productivity and quality. To this end we will continue to improve labour-management communications, seeking expanded job scope and flexibility, experimenting with more substantial employee involvement in decisions, and addressing job security and income protection concerns.**

We believe that these commitments speak for themselves and will continue to reinforce and perpetuate a strong and healthy labour-management climate in the Canadian automotive industry.

TAX AND TARIFF ISSUES

The automotive companies have made and will continue to make representations to government on such matters as the effective utilization of investment tax credits, tax losses, the capital cost allowance and incentives to stimulate research and development in Canada. One tax issue that we particularly want to focus on, however, relates to the federal sales tax.

The existing federal sales tax system discriminates in favour of offshore vehicles. Offshore imports have a tax advantage of about $100 to $200 per unit over Canadian-produced vehicles sold at the same price and in direct competition in the Canadian marketplace. This inequity arises because the federal sales tax of 9% is levied on different bases for domestically produced vehicles and imports. **We therefore recommend:**

> **That the federal sales tax be levied on all vehicles sold in Canada on the basis of the purchase price paid by the dealer and that this change be implemented immediately under a special sales tax rule for vehicles. The matter of shifting the federal sales tax to the wholesale level for all taxable commodities should continue to be studied by the special industry committee that has been set up by the government for this purpose. As part of this recommendation we suggest reduction of the general rate of tax to 8% from 9% because the tax would then be levied at the wholesale level on finished motor vehicles.**

Customs Matters

The General Preferential Tariff: Canada gives preferential tariff treatment to less developed nations, i.e., two-thirds of the Most Favoured Nation rate of duty or the British Preferential Rate, whichever is lower. As the British preferential rate is zero for automotive products, all eligible nations may export their automobiles, trucks and parts to Canada without duty. Mercedes-Benz imports trucks duty-free from Brazil, the Koreans will be importing their sub-compact Pony duty-free, and a number of components from other countries currently enter Canada free of duty. The motor vehicle industries in some of those countries are efficient and as modern as the industry in Canada. Moreover, many of the countries have severe restrictions on trade in motor vehicles and parts that effectively exclude Canada from shipping to them. The developing nations also generally support their motor vehicle and parts industries with extensive government financed loans, grants, subsidies and other types of assistance.

During the last GATT negotiations, the British Preferential Tariff was eliminated by Canada for all countries except New Zealand and Australia. We accept the general principle of preferential treatment for developing countries, but this tariff change created a loophole through which some developing nations with significant automotive industries have had duty-free access to Canada for automotive products. We therefore recommend:

That the preferential tariff rate extended to developing countries for their automotive products be limited to two-thirds of the Most Favoured Nation tariff rate for automotive goods.

Tariff References: Examinations into a number of technically complicated tariff procedures, including customs valuation, harmonization and made/not made tariff regulations are currently under way. Each of these reviews could affect the motor vehicle and parts industry in Canada. Because the rapidly changing nature of the industry could be influenced by these changes in tariff regulations, we strongly suggest that the industry be given sufficient time to respond to these changes and that any recommended changes be open to further hearings before being accepted by the government. Furthermore, in all cases, the government should establish a simple, uniform and quick appeal procedure that would allow the industry to respond to the potentially adverse effects of tariff regulations under rapidly changing business conditions.

TRANSITIONAL ASSISTANCE FOR INDUSTRY AND LABOUR

The Automotive Products Trade Agreement introduced a structural revolution in the Canadian automotive industry; tariffs were dismantled, domestic protection was surrendered, and a whole industry shifted, almost over night, from small production runs and a wide range of products to longer runs and fewer product lines. The industry had become North American, and firms based in Canada changed dramatically in order to remain competitive. The government of Canada introduced several programs to help the automotive industry make the transition to the new competitive environment created by the Auto Pact. Two-year income tax holidays and accelerated equipment depreciation and building writedowns were offered for new or incremental capital investments made to produce original equipment parts. Long-term loans below prime were provided to higher risk investments, and Temporary Assistance Benefits (TAB) were paid to workers who lost their jobs as the industry went through the initial period of transition and structural change. TAB assisted workers to make the move to new employment either within or outside the automotive industry. These programs all lapsed by 1973, and assistance for automotive manufacturers was provided thereafter through the general industry

programs of the Department of ITC/DREE.

The Industry and Labour Adjustment Program (ILAP) was introduced in 1981 in response to the general economic downturn and the extreme hardships facing certain communities. ILAP is a reimbursable contribution for fixed asset additions. The Crown provides an unsecured no-interest loan and deferred principal repayment schedules for eligible companies. Initially, ILAP was extended to communities with high unemployment. Automotive communities, including Windsor, Chatham, Brantford and Kitchener/Waterloo have come under the program and, in 1982, the automotive parts sector as a whole was also placed under the program. However, this program will end on March 31, 1984.

The industry is currently undergoing a process of restructuring and technological change that is more significant, in terms of its effects on the workforce, than any other period in the history of the industry, including the period that followed the introduction of the Auto Pact. The government of Canada has consistently shown its commitment to the automotive industry through the innovative Auto Pact transition assistance, general departmental programs and, more recently, targeted assistance have been available, the Task Force is concerned that the current approach may not be sufficient to enable the automotive industry to move smoothly through the difficult times ahead and capitalize on the opportunities presented by the new competitive environment. Moreover, while elements of the ILAP program are significant and welcome, by itself it is inadequate as a program of transitional assistance for workers.

The Task Force believes that continuation of the ILAP approach and expansion of its coverage are vital to ensuring an effective process of transition in the industry. **We therefore recommend:**

That the ILAP program be expanded and extended to the full automotive sector for a period of five years.

That the labour adjustment benefits that were applicable in the community part of the ILAP program be provided under the expanded and extended ILAP program for the automotive sector and that they be expanded to encompass the full range of benefits that were provided under the TAB program during the Auto Pact transition years.

HUMAN RESOURCE DEVELOPMENT

The policy framework and strategic measures we have recommended establish a context for industry planning for the next decade. But one element that has not received the attention it deserves is human resource planning to meet new and changing needs in the automotive sector as the industry is transformed.

Insufficient study has been given to the technological changes taking place in the industry, the level and mix of skills that they will require, and the extent to which adequately trained technical personnel will be available to meet the demands of a much more complex and computerized production system. Similarly, the white collar skills required in the industry appear to be changing with the adoption of computer-aided design and on-line processing and scheduling, but it is unclear as yet precisely what white collar skills will be needed in the future. In addition, not enough is known about the social impacts of advanced technology in the industry, and what its long-term effect on employment levels is likely to be.

The industry's efforts to involve workers at all levels of the production system in group problem solving efforts will require new kinds of training for both the production and managerial workforces. Whether such training will be provided exclusively on the job or whether it also needs to be emphasized in general education and training curriculums is an important and open question.

These and similar human resource issues in the industry require immediate examination and innovative policy and program responses. We would thus urge governments to begin now to deal with existing and emerging human resource development issues in the automotive industry. **We therefore recommend:**

That the human resource aspects of changing conditions in the automotive industry be given immediate and thorough study by government, industry and labour, with a view to recommending responsive policies and programs that could be introduced and sustained over at least the next five years.

CONTINUED CONSULTATION

The Task Force brought together the separate but interdependent interests of business, labour and government in seeking a recommended strategic course for the automotive industry in Canada. The process has shown repeatedly the importance and value of open discussion and consultation. But the task force approach is only one part of establishing and maintaining a sound and supportive environment in which priorities, policies and strategies for the industry can be developed. Two other elements deserve particular attention:

- Formal mechanisms for continuing consultation
- An effective government structure

Formal Mechanisms For Continuing Consultation

The Minister of ITC/DREE recognized the need for industrial consultation by initiating this Task Force on the Canadian Motor Vehicle and Automotive Parts Industry. Based on our experience in this Task Force, we commend the Minister on his initiative and suggest that efforts to date bode well for the future of industrial cooperation and policy development. Nevertheless, the task force approach is not a suitable vehicle for ongoing consultation. It is most appropriate for tackling a major issue or question, using concentrated resources, in a relatively short period of time. The purpose of this Task Force, for example, was to make strategic proposals intended to guide the automotive industry in the longer term as well as the near term. This having been accomplished we respectfully suggest that this Task Force be disbanded.

At the same time, we recognize a continuing requirement for business, labour and government to maintain open discussion and consultation on policy-related matters in the automotive industry. However, this process should be guided by the need for discussion rather than by the process itself. **We therefore recommend:**

That the Minister of ITC/DREE establish an Automotive Council to provide a forum for discussion, consultation and advice on automotive policy matters.

That the Minister of ITC/DREE report annually on the state of the automotive industry in Canada.

We believe that the Automotive Council should work from a well-defined charter and agenda, meeting at least annually and providing the Minister with advice on a range of matters. For example, the Council could:

- Comment on the Minister's annual report on the state of the Canadian automotive industry; this report, which would update the content of the Task Force report, would be prepared by the department of ITC/DREE

- Review the Automotive Products Trade Agreement and extended APTA provisions, as well as the performance of the industry under them

- Review automotive policy and program proposals and selected program evaluations

- Discuss specific issues as they arise and as the Council sees fit

Membership on the Automotive Council should include the various interests in the automotive industry as were represented on this Task Force. Membership could also include representation from related manufacturing industries. Government should continue its participation in an ex officio capacity.

Effective Government Structure

The Task Force proposals place a premium on effective and appropriate government involvement in the automotive sector. Our recommended trade policy framework must be quickly transformed into a set of operating principles. Other proposals in this report call for an intensified program to encourage the technological revitalization of the parts industry. As well, advances must be made in the tax and tariff regimes and in program structures to ensure that the incentives and environment exist to encourage new investment and employment.

As members of organizations that deal regularly with those in government responsible for the automotive area, many of us believe that the responsibility for such a significant sector of the economy should be positioned at a senior level within the government. At present, the first unit fully dedicated to automotive matters occurs two levels below the office of the Deputy Minister. Moreover, responsibilities at this level are spread across several units, and no single position with complete and sole responsibility for the automotive sector exists. At the Assistant Deputy Minister level, the automotive industry must compete for attention and priority with several other industries and program responsibilities. We find this positioning inconsistent with the automotive industry's position as Canada's largest manufacturing sector, accounting for 21% of Canada's total merchandise exports.

Recent reorganization has served to disperse responsibility for the automotive area even further, making the challenge of achieving coordinated and supportive policy more difficult. A new coordinating body, the Ministry of State for Economic Development, is now a key part of the policy development process. At the same time, the trade portfolio has been separated from ITC/DREE and placed within an expanded Department of External Affairs. Whatever the past problems in achieving a coordinated automotive policy, the process is more complex and difficult today. The automotive sector now commands the attention and involvement of a number of senior officials across government. Nonetheless, the main focus for the industry remains the Department of ITC/DREE and the Task Force is concerned that, under the present government departmental structure, the requirements of the automotive industry are unlikely to be dealt with adequately unless a strong automotive organization exists at a senior level within the Department of ITC/DREE. **We therefore recommend:**

That an Office of Automotive Affairs be established at the Assistant Deputy Minister level within ITC/DREE.

This new organization would assume all existing responsibilities for the automotive sector. As well, it would take on the responsibility of preparing the annual report on the automotive industry and providing staff reports to the Automotive Council. The creation of an Office of Automotive Affairs should not require any more staff than are currently assigned to the automotive sector in the department. Moreover, as has been demonstrated in this Task Force, the necessary skills and analytical capabilities are also in adequate supply.

CONCLUSION

A TRANSFORMED INDUSTRY AND CANADA'S ECONOMIC FUTURE

We began this report by illustrating how the automotive industry lies at the heart of Canada's industrial base, providing jobs, markets for industries and companies large and small, and the impetus for technological advances, industrial innovation and wealth creation. Our deliberations have led us to the conclusion that the significance of the automotive sector to the national economy can only grow as it continues to provide good markets for the traditional businesses and major new markets for the strategic industries of the future. This is why Canada has maintained, and must continue to maintain, a major commitment to the automotive sector.

We have also made clear throughout the report, however, that commitment does not mean sustaining an automotive industry that is uncompetitive or unresponsive to shifting conditions and technological change. As has been amply demonstrated over the past few years and documented in this report, this is neither what the industry needs nor what it expects to receive.

Rather, the industry, as represented by the membership of this Task Force, is calling for a policy that will create an environment within which the industry's own initiatives and strategies can bear fruit. This is the intent of the automotive trade policy framework that the Task Force recommends be adopted by the government of Canada.

We believe that the proposed policy will respond to the exigencies of the current challenges facing the industry, but also be flexible enough to continue to provide a fairer competitive environment over the next decade. Coupled with the more specific actions and programs recommended in previous chapters, the automotive trade policy framework we have recommended should serve to create a dynamic environment where the industry's strategies can succeed and investments can thrive.

With a favourable policy environment and appropriate supportive measures provided by government, the industry can proceed with confidence to maintain and build on the initiatives that have been part of its response to the demands of the international competitive environment, thus developing a "balanced and competitive automotive manufacturing capability in Canada".

Moreover, when government provides supportive policies and programs for the automotive industry, the results are far-reaching. These policies and programs will pave the way for the industrial development, technological advances, and means of wealth creation upon which Canada's future economic prosperity will be built. We therefore urge that the government give top priority to considering and implementing our recommendations in the months to come.

APPENDICES

APPENDIX 1

Terms of Reference

TASK FORCE ON THE CANADIAN MOTOR VEHICLE AND AUTOMOTIVE PARTS INDUSTRIES

A private Task Force has been established to review the development, competitive environment and position of the Canadian automotive manufacturing industry and to make recommendations that will assist the Minister of ITC/DREE in identifying priorities and formulating strategies and policies to support industry initiatives which will contribute to a balanced and competitive automotive manufacturing capability in Canada. The Task Force is instructed to report on:

1. The current situation in, and structure of, the Canadian motor vehicle and parts industry, and its role and importance in the overall Canadian economy
2. Recent and possible future developments affecting the Canadian motor vehicle and parts industry, such as changes in product and process technologies and emerging trade, investment, production and market trends in both North America and the world
3. The constraints and opportunities which are facing the industry in Canada and its response to these factors, over the near and longer term, to adjust to changing competitive conditions and to increase productivity
4. The human resource effects of future directions in the motor vehicle and parts industry in Canada, including the implications of productivity gains and technological changes
5. Recommendations to the Minister on a range of policy alternatives to include the following areas:
   a) Government programs relating to the industry
   b) Manpower policy including skill training, worker and community adjustments, and income support

c) Trade relations

d) Tax and fiscal arrangements

e) Export development

f) Technology and joint ventures

g) Government regulation relating to the industry

h) Continuing industry, labour, government roles, responsibility and co-operation.

The Task Force membership will include representatives of Chrysler Canada, the Ford Motor Company of Canada, General Motors of Canada, the Motor Vehicle Manufacturers' Association, the Automotive Parts Manufacturers' Association of Canada and the United Automobile Workers Union.

NEWS RELEASE FROM THE DEPARTMENT OF INDUSTRY, TRADE AND COMMERCE AND REGIONAL ECONOMIC EXPANSION

Ottawa, December 30, 1982 - Ed Lumley, Minister of Industry, Trade and Commerce and Regional Economic Expansion confirmed that Patrick Lavelle, President of the Automotive Parts Manufacturers' Association, and Robert White, Director for Canada of the United Automobile Workers (UAW) will co-chair a task force to consider policy and strategic alternatives for the motor vehicle and automotive parts industry sector.

The task force will include Don Hackworth, President of General Motors of Canada Ltd., Ken Harrigan, President of Ford Motor Company of Canada Ltd., Moe Closs, President of Chrysler Canada Ltd., Jim Dykes, President of the Motor Vehicle Manufacturers' Association, Sam Gindin, Research Director of the UAW, and Douglas Sedgwick, Executive Vice-President of the Tridon Companies. The federal government will be represented by Norm Fraser, Director General of the Automotive, Marine and Rail Branch, Department of Industry, Trade and Commerce and Regional Economic Development.

The purpose of the Motor Vehicle and Parts Industry Task Force will be to review the development, competitive environment and position of the Canadian automotive manufacturing industry and to make recommendations that will assist in identifying priorities and formulating strategies and policies to support industry intiatives that will contribute to a balanced and competitive automotive manufacturing capability in Canada.

The automotive industry is the largest manufacturing industry in Canada and indirectly affects thousands of jobs in other industrial sectors. "Economic conditions and foreign competition have eliminated tens of thousands of jobs and more than $6 billion of output in our economy. The government wants constructive solutions in order that

Canada can have a viable and competitive motor vehicle and automotive parts industry. Thus I am calling on experts in industry to combine their efforts and make recommendations on appropriate courses of action," Mr. Lumley said.

"I would stress that this is not a government task force but an industry task force. It brings together the motor vehicle companies, the automotive parts industry and the UAW in a collective effort to identify actions that will achieve lasting results."

The task force has been asked to report on five main topics:

1. The current industry structure and situation, with emphasis on its role in the Canadian economy;

2. How the industry will be affected by changes in products, processes, investment, market trends;

3. How the industry can adjust to constraints and opportunities it faces;

4. The impact of future directions on the human resources; and

5. The role each interest group must play in ensuring a healthy industry.

APPENDIX 2

NOTE ON STATISTICS USED IN THE REPORT

Although extensive statistics are gathered on the automotive industry in Canada and, in fact, on most automotive industries throughout the world, the conventions that guide the collection and categorization of those statistics are not consistent from one jurisdiction to another and often not even within a single jurisdication. However, when studying general trends or company rates of change over time, problems with data consistency often do not impair a general understanding of the phenomenon in question. The Task Force believes that most of the trend data in this report are of that type. We have in each case selected the best available statistics at our disposal and believe that in almost all cases these data accurately reflect the economic reality.

The one major exception to this is the case of statistics on the Canadian automotive parts industry. Because of classification problems we believe that these statistics significantly underestimate the actual levels of shipments, employment, value added, and investment in the parts industry. For the purposes of this report we have taken the 365 establishments in SIC 325, Motor Vehicle Parts and Accessories, and SIC 188, Automotive Fabric Accessories, as constituting the automotive parts industry. However, the methods by which Statistics Canada classifies manufacturing plants eliminates nearly 800 companies with at least some automotive parts manufacturing from these two classifications.

The problems with the current classification system are two-fold. First, many plants that ship some or even all of their output to the automotive industry are counted in other industrial categories. For instance, Ford's foundry in Windsor and AMC's wholly-owned Holmes Foundry in Sarnia are classified under SIC 294, Foundry Manufacturers.

Chrysler Canada's plant in Etobicoke, which manufactures aluminum castings, Ford's Essex aluminum plant, and CAE Montupet, an independent automotive aluminum die caster, are all classified under SIC 296, Aluminum Castings. Ford's glass plant in Niagara Falls and Duplate Glass are both considered glass manufacturers under SIC 3562, rather than auto parts producers. Philco Ford in Don Mills is classified as an electronics manufacturer under SIC 334, and automotive battery manufacturers are classified under yet another SIC code. In 1981, parts employment at the Big Four vehicle makers alone that was not included by Statistics Canada as parts employment was 2,918 workers.[1]

A second problem with the classification system is that only plants whose production is at least 50% automotive parts are counted as parts facilities. Hundreds of companies with automotive product lines are not counted as having any automotive production. In some cases these companies are among the largest parts manufacturers in Canada.

The Surface Transportation Branch of the Department of Industry, Trade and Commerce/Regional Economic Expansion has determined that of the 21 largest Canadian exporters of aftermarket parts, 15 are not included in SIC 325 or 188. Of the eighteen largest parts exporters to Europe, 13 are not listed in SIC 325 or 188, and a full one-third of the 30 largest parts exporters to the U.S. are not included.

ITC/DREE estimates that these two classification problems lead to a $1.9 billion underestimation of 1981 Canadian parts production, a sum equal to 40% of the actual production level reported for SIC 325 and 188. Similarly, employment and investment in the automotive parts industry appear to be understated by the same proportion.

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1. Special Statistics Canada tabulations for the Task Force.

The APMA has conducted an independent analysis of the parts companies not included in SIC 325 and 188, and estimates that 30-50,000 employees in Canadian automotive parts manufacturing are not counted in these two categories. (See Appendix 4.)

Because it is difficult to estimate the extent of the undercounting in the parts industry accurately, and because it is important to have statistically consistent data over time, the Task Force has elected to use official statistics on the parts industry throughout this report. We believe that the trends that these data illustrate are accurate. We caution, however, that in all cases where the official statistics are used to document the size or importance of the parts sector, particularly in relation to other industries, they significantly understate the actual case.

U.S. parts industry statistics share many of the problems associated with Canadian parts industry data. We have not tried to estimate the extent of undercounting in the U.S. parts industry and, in keeping with our approach to the Canadian data, have used the official statistics. We caution that all comparisons of the relative size of the Canadian and U.S. parts industries are complicated by these statistical problems.

The other important statistical issue is the use of automotive trade statistics. Overall Canada/U.S. automotive trade data from Statistics Canada are reconciled with trade data from official U.S. sources. Canadian trade data compiled from Auto Pact documents, however, are not reconciled with U.S. sources. Thus, the Statistics Canada trade data used in the text and appendices will not be exactly the same as Auto Pact-based trade data from ITC/DREE. We have noted throughout the text which source we are using at various points.

We also note that Canada/U.S. trade in materials for automotive use such as steel or plastics are included in neither Statistics Canada

nor Auto Pact automotive trade data. They do appear in non-automotive trade statistics but it is impossible to estimate them separately. Thus, all automotive trade statistics in the report include only finished parts and vehicles.

APPENDIX 3

MAJOR MOTOR VEHICLE ASSEMBLY PLANTS IN CANADA

LOCATION	COMPANY/PLANT NAME	PRODUCTS
British Columbia		
Burnaby	Canadian Kenworth Company (a Division of Paccar Canada Ltd.)	trucks
Burnaby	Freightliner of Canada Ltd.	trucks
Kelowna	Western Star Trucks Inc.	trucks
North Vancouver	Pacific Truck and Trailer Ltd.	trucks
Manitoba		
Winnipeg	Flyer Industries Ltd.	buses
	Motor Coach Industries	buses
Nova Scotia		
Halifax	Volvo Canada Ltd.	cars
Ontario		
Brampton	American Motors (Canada) Ltd.	cars
Chatham	International Harvester Canada	trucks
Oakville	Ford Motor Company of Canada, Ltd.	cars
	Ford Ontario Truck Plant	trucks
Oakville	Mack Canada, Inc.	trucks

LOCATION	COMPANY/PLANT NAME	PRODUCTS
Oshawa	General Motors of Canada Ltd.: Car Assembly Plant	cars
	GM Truck Assembly Plant	trucks
Mississauga	Ontario Bus Industries Ltd.	buses
Scarborough	GM Van Plant	vans
St. Thomas	Ford Motor Company of Canada, Ltd.	cars
Windsor	Chrysler Canada Ltd.: Car Assembly Plant	van wagons
	Pillette Road Plant	vans and wagons
Quebec		
St Eustache	GM Diesel Division Coach Plant	buses
Ste Thérèse	Canadian Kenworth Company (a division of Paccar Canada Ltd.)	trucks
Ste Thérèse	General Motors of Canada, Ltd.	cars
Ste Claire	Prévost Car, Inc.	buses

Source: Compiled from information supplied by the companies, the Motor Vehicle Manufacturers' Association and Statistics Canada.

APPENDIX 4

A PROFILE OF THE AUTOMOTIVE PARTS INDUSTRY IN CANADA

This profile of the automotive parts and accessories industry includes data from establishments primarily engaged in manufacturing motor vehicle parts (except truck and bus bodies) and accessories for use on motor vehicles, including engines, brakes, clutches, axles, gears, transmissions, wheels, frames, radiators, springs, heaters, mirrors, automobile upholstery, seat cushions and backs and seat belts. The manufacture of tires and tubes is excluded.

NUMBER OF ESTABLISHMENTS AND EMPLOYMENT

Estimates of the size of and employment in the automotive parts sector are subject to the undercounting and other statistical difficulties outlined in Appendix 2. In 1982, there were 365 establishments classified as manufacturers of automotive parts in the combined Statistics Canada industry codes SIC 325, Motor Vehicle Parts and Accessories, and SIC 188, Automotive Fabric Accessories. Nearly 800 other companies sell to the automotive industry, but are not classified as parts manufacturers because only a portion of their output is specifically automotive. Thus, there are nearly 1200 automotive parts manufacturers in total. Most of these are located in Ontario, but there are also a substantial number of plants in Quebec and the western provinces.

Official 1981 statistics indicate 56,000 workers in the parts industry but given the difficulty of defining the automotive parts sector for statistical purposes, these official statistics could underestimate direct employment in automotive parts manufacturing by as many as 30,000-50,000 jobs.[1] (See Appendix 2.)

1. Automotive Parts Manufacturers' Association of Canada (APMA) Research.

VALUE OF PRODUCTION AND CONSUMPTION

The value of shipments from the Canadian automotive parts industry (SIC 325 and 188) rose by 10.7% in 1982, to a level of $5.4 billion. Canada traditionally produces about 7% of total North American automotive components, although this share dropped to as low as 6.5% in 1980.

Motor Vehicle Parts and Accessories Production - Canada vs. U.S.

($ millions)

Year	Canada	U.S. ($ Cdn.)	Canada as a % of Total North America
1972	2,106.0	27,765.3	7.1
1973	2,533.8	32,919.8	7.1
1974	2,510.0	32,231.8	7.2
1975	2,552.9	34,035.4	7.0
1976	3,417.8	43,271.2	7.3
1977	4,138.8	57,017.0	6.8
1978	5,119.7	68,345.5	7.0
1979	4,897.4	69,833.6	6.6
1980	4,034.2	58,119.3	6.5
1981	4,879.3	66,527.6	6.8
1982 (est.)	5,400.0	N/A	-

Source: Statistics Canada; U.S. Department of Commerce; and APMA.

Automotive parts production can be divided between parts intended for sale to the vehicle manufacturers (original equipment parts) and those for sale to the automotive replacement market (aftermarket parts). Original equipment parts production totalled $3,884 million in 1981 accounting for 69% of all parts production. In 1981 aftermarket

production accounted for 31% of shipments and in unadjusted dollars grew by more than 20% over the 1980 level.

Canadian Original Equipment and Aftermarket Parts Production
($ millions)

Year	Original Equipment Production	As a % of Total	Aftermarket Production	As a % of Total	Total Canadian Parts Production
1979	3612.4	73.8%	1285.0	26.2%	4897.4
1980	2788.6	69.1%	1245.6	30.9%	4034.2
1981	3380.2	69.3%	1499.1	30.7%	4879.3

Source: Statistics Canada and APMA.

Over $11 billion worth of automotive components were consumed in Canada during 1981, mostly by the vehicle manufacturers in the production of new vehicles. The vehicle companies in Canada used new components worth more than $9.8 billion, most of which were imported from the United States. This consumption of original equipment parts in Canada represented 11.8% of North American consumption in 1981. By contrast, Canada's production of all components, including aftermarket parts, was only 6.8% of North American production, resulting in a serious production-to-consumption shortfall. This was reflected in an automotive parts trade deficit of over $5 billion in 1981.

Consumption of Automotive Parts by Vehicle Manufacturers

($ millions Cdn.)

Year	Canada	Within the United States	Canada as a % of Total
1972	3,239.2	32,483.2	9.1
1973	3,843.1	38,460.1	9.1
1974	4,314.1	34,338.1	11.2
1975	4,967.6	37,010.7	11.8
1976	6,090.8	48,796.2	11.1
1977	7,096.8	64,334.4	9.9
1978	8,378.8	76,966.0	9.8
1979	8,975.2	79,076.1	10.2
1980	8,752.3	64,364.5	12.0
1981	9,823.4	73,347.4	11.8

Source: Statistics Canada, U.S. Department of Commerce and APMA.

STRENGTHS IN ORIGINAL EQUIPMENT PARTS PRODUCTION

Canada's strengths in original equipment production can be evaluated by analyzing U.S. import statistics. Sectors where Canada is the dominant importer into the U.S. indicate considerable production capabilities in Canada. Canada captured 77.5% of the U.S. import market for interior automotive furniture, 73.8% for sealed beams, 69.9% for radiators and 69.3% for wheels. (See Table 6.1 in the text.)

Nevertheless, there has been deterioration in the U.S. market share of many of these Canadian components. This is the result of intense competition from many countries for a share of automotive parts

production. Japan has taken significant market shares in many of the sectors listed in Table 6.1, but countries such as Mexico, Brazil, Spain, Taiwan, Korea and others have also begun to ship into Canada's major export market, the United States. In fact, some 81 countries around the world were able to sell automotive components to the U.S. during 1982, accounting for some $6.6 billion in shipments.

In a number of product groupings, however, Canada's share of the U.S. import market has grown. These include batteries, shock absorbers, sealed beams, wheels, mufflers and tailpipes. With the exception of wheels, they gained most of their strength from increased aftermarket sales.

STRENGTHS IN AFTERMARKET PARTS PRODUCTION

Strengths in the production of aftermarket components are directly related to the amount of trade by various industry subsectors. In the aftermarket, Canada has a positive trade balance in brakes, exhaust systems, batteries, glass products and wheels. In each of these areas there are a number of strong companies. Canada has a trade deficit in power-train components, steering and suspension systems and electrical parts. There are a few companies operating in Canada in each of these subsectors, but imports generally dominate the market, indicating certain weaknesses in Canadian production capabilities.

Trade in Aftermarket Parts, 1981
($ millions)

	Imports	Exports	Balance
Body Parts	43	9	-34
Engines	28	10	-18
Engine Parts	128	64	-64
Power Trains	96	1	-95
Steering and Suspension	46	--	-46
Electrical Parts	49	11	-38
Shock Absorbers	11	7	- 4
Brakes	46	82	36
Exhaust Systems	26	32	6
Batteries	--	20	20
Glass Products	--	11	11
Wheel Rims	--	7	7
Springs	5	6	1

Source: APMA and Department of ITC/DREE.

INDUSTRY STRUCTURE

There are three basic sources of automotive components in Canada: in-house production by the vehicle companies; parts manufactured by foreign-owned multinationals; and parts produced by a large number of Canadian-owned firms. A list of the principal facilities and their products can be found at the end of this appendix.

The Task Force has been able to obtain from Statistics Canada and an APMA survey of independent parts manufacturers the first accurate breakdown of production and employment by the three groups of component manufacturers. In 1981, the most recent year for which data are available, in-house production accounted for 41.3% of parts shipments, or $2 billion in shipments. The independents accounted

for the remaining $2.9 billion, or 58.7% of production. The 12 largest independent foreign-owned parts companies accounted for $1 billion in shipments, or about 20.5% of total production. The remaining companies produced 39.2% of the components manufactured in Canada. The foreign-owned companies in this group, however, tend to be larger than the Canadian-owned firms and produced two-thirds of this total, or $1.3 billion. Wholly-owned Canadian companies accounted for only 11% of total output, or $537 million in shipments.

These figures correspond closely to a special tabulation prepared by Statistics Canada in 1978, which indicated that 89.6% of the value of shipments in the automotive parts and accessories industry was produced by foreign-owned companies.

Structure of the Canadian Automotive Parts Industry, 1981
($ millions)

	Share	Value of Shipments
In-house	41.3%	2,016
12 Largest Foreign-owned Independent	20.5%	999
Remaining Manufacturers -		
Other Foreign-owned	27.2%	1,327
Canadian-owned	11.0%	537
Total	100%	$4,879

Source: Special Tabulations by Statistics Canada and the APMA for the Task Force.

The in-house share of production in 1981 (41.3%) was identical to the share achieved in 1972. In-house production did increase, however, until 1978 when it peaked at 50.7% before falling back to the 1972 level.

The vehicle companies tend to be more capital intensive than the independent parts manufacturers, resulting in a lower overall share of parts employment. In 1981, in-house parts production accounted for 34.5% of parts employment, up from 1972 when 31.4% of the workers in the parts industry were employed at in-house facilities.

In-house Share of Shipments, Employment, and Value Added in the Automotive Parts Industry

Year	Per Cent of Shipments	Per Cent of Employment	Per Cent of Value Added
1972	41.3	31.4	37.0
1973	42.1	31.0	38.3
1974	42.2	30.6	40.6
1975	45.5	31.8	42.2
1976	48.0	33.4	44.5
1977	48.6	34.1	45.3
1978	50.7	35.7	46.5
1979	43.5	32.9	41.6
1980	41.2	32.2	38.5
1981	41.3	34.5	38.4

Source: Special Statistics Canada Tabulations for the Task Force.

Large companies dominate the figures on shipments of automotive parts and accessories. Twenty-one establishments employing 500 or more workers accounted for 58.5% of all parts shipments in 1981, the latest Statistics Canada survey year. There were 251 parts establishments in Canada employing fewer than 100 workers, and they accounted for only 13.8% of shipments in 1981. The remaining medium-sized establishments accounted for 27.6% of production.

Automotive Parts Industry by Size of Company, 1981

Number of Employees	Number of Establishments	Per Cent of Total Establishments	Value of Shipments ($ millions)	Per Cent of Total Shipments
fewer than 100	251	73.0	603.2	13.8
100 - 500	73	21.2	1,204.1	27.6
500 or more	20	5.8	2,551.1	58.5
Total	344	100.0	$4,034.2	100.0*

* Does not add due to rounding.
Source: Statistics Canada.

CAPITAL EXPENDITURES

During the last five years, the automotive parts industry has increased its capital expenditures on new plant and equipment by an average of $433.6 million per year, four times the average of the previous five years. Capital expenditures in 1983 are estimated to be up slightly from the $190 million registered in 1982.

New Capital Expenditures in Automotive Parts Plants*
($ millions Cdn.)

Year	Canada	United States	Canada as a % of Total
1972	55.9	1,293.8	4.1
1973	78.7	1,419.9	5.3
1974	119.9	1,723.1	6.5
1975	81.2	1,473.4	5.2
1976	62.5	1,274.0	4.7
1977	109.6	2,599.4	4.0
1978	203.9	3,680.6	5.2
1979	330.9	4,108.0	7.5
1980	780.9	4,723.1	14.2
1981	666.5	5,490.1	10.8
1982	189.8	N/A	—
1983 **	200.0	N/A	—

* Does not include capital expenditures for repairs.
** Preliminary estimate based on intentions.

Source: Statistics Canada, U.S. Department of Commerce and APMA.

With the exception of 1980 and 1981, when two large in-house plants were under construction, the bulk of capital expenditures by the parts industry has been undertaken by independent component manufacturers, many of them Canadian-owned. (In 1979 Ford invested in a new engine plant and General Motors expanded and modernized a transmission factory.) During these years, the share of investment undertaken by independents began to deteriorate due to the difficult economic climate facing the industry. (See Table 6.2 in Chapter 6.)

A general description of the Canadian parts industry, although important, does not give a sense for the diversity of companies and products in the industry. Therefore, we have attached a list of some of the major automotive parts facilities in Canada, their locations, and major product lines to give a fuller sense of the industry's scope and character.

A PARTIAL LIST OF MAJOR AUTOMOTIVE PARTS PLANTS IN CANADA

COMPANY/PLANT NAME	LOCATION	PRODUCTS
In-house facilities		
American Motors (Canada) Inc.	Sarnia	blocks & castings
	Stratford	soft trim
Chrysler Canada Ltd.		
Trim Plant	Ajax	door panels; seat cushions & backs
Aluminum Casting Plant	Etobicoke	pistons, water pump bodies, transmission transfer cases
Spring Plant*	Windsor	seat springs
Ford Motor Company of Canada Ltd.		
Niagara Glass Plant	Niagara Falls	automotive glass
Essex Plant	Windsor	V6 engines
Ensite Engine Plant #1	Windsor	V8 engines
Ensite Engine Plant #2	Windsor	engine machinery & stamping
Casting Plant	Windsor	iron castings
Essex Aluminum Plant	Windsor	aluminum castings
Philco Ford	Don Mills	radio and electronic components
General Motors of Canada Limited		
Fabrication Plant	Oshawa	stampings, batteries, radiators, instrument clusters, plastics, RIM
Foundry	St. Catharines	metal castings
Axle Plant	St. Catharines	axles, disc brakes, spark plugs, front suspensions, transmission components
Engine Plant	St. Catharines	V6 & V8 engines

* Scheduled to close at end of 1983 model year.

COMPANY/PLANT NAME	LOCATION	PRODUCTS
GM (cont'd)		
Trim Plant	Windsor	trim sets, door covers,
Transmission Plant	Windsor	front wheel drive automatic transmissions
Foreign-Owned Independent Manufacturers (larger facilities)		
Budd Canada Inc.	Kitchener	frames, etc.
Canadian Fram Limited	Chatham	air cleaners, fans, etc.
Continental Group of Canada	Amherstburg, Anjou, Brampton	stampings, springs, etc.
Gabriel of Canada	Toronto & elsewhere	shock absorbers, suspensions, exhausts
Hayes-Dana Inc.	St. Catharines & elsewhere	drive shafts, frames, axles, etc.
Kelsey-Hayes Canada	Windsor, St. Catharines	wheels, brake parts, etc.
Motor Wheel Corporation of Canada	Chatham	wheels, etc.
Rockwell International of Canada	Tilbury, Bracebridge, Chatham, Gananoque & Mississauga	springs, axles, stampings, plastics, etc.
TRW Canada, Thompson Products Div.	St. Catharines & elsewhere	suspension, valves, etc.
Walker Canada	Cambridge	exhausts
Canadian-owned Companies (larger facilities)		
A.G. Simpson Co. Ltd.	Toronto, Windsor & elsewhere	stampings
Distex-SNA Inc.	Anjou,	brake pads, etc.
Dominion Auto Accessories	Toronto & elsewhere	protective lighting and mirrors
Fabricated Steel Products	Windsor	stampings
Fleck Manufacturing Inc.	Tillsonburg & Huron Park	wire harnesses, etc.
Magna International	Downsview & elsewhere	plastics, brake parts, stampings, etc.

COMPANY/PLANT NAME	LOCATION	PRODUCTS
Canadian-owned (cont'd)		
National Auto Radiator Manufacturing	Windsor	stampings
R.J. Stampings	Montreal	stampings
Stelco Inc. (parts mfg. only)	Hamilton	fasteners
Tamco Ltd.	Windsor	gear shift levers, shifters
Tridon Ltd.	Burlington & Oakville	clamps, electronic flashers, wiper mechanism & blades
Waterville Cellular Products	Waterville & elsewhere	rubber products

APPENDIX 5

CANADIAN AUTOMOTIVE PRODUCTION AND TRADE FIGURES

The tables in this appendix were compiled and/or updated by the Department of Industry, Trade and Commerce/Regional Economic Expansion and Task Force staff working from the sources indicated on each table. The tables provide the following information:

Table A-1	Total Employment in Canadian and U.S. Automotive Industries
Table A-2	Production Workers in Canadian and U.S. Automotive Industries
Table A-3	Value of Shipments in Canadian and U.S. Automotive Industries
Table A-4	Capital Expenditures in Canadian and U.S. Automotive Industries
Table A-5	Value Added in Canadian and U.S. Automotive Industries
Table A-6	Canadian Value Added in Automotive Production Compared to Total Value of Canada/U.S. Motor Vehicle Production for the Big Four
Table A-7	Total Canadian Value Added by Category of Production for the Big Four

Table A-8	Actual Canadian Value Added as a Percentage of Cost of Sales Compared to CVA Commitments of All Auto Pact Producers
Table A-9	International Sourcing Pattern of Original Equipment Parts of the Big Five Motor Vehicle Manufacturers
Table A-10	Canada/U.S. Trade in Automotive Products (As reported by Statistics Canada)
Table A-11	Canada/U.S. Trade in Automotive Products Within and Outside the Auto Pact
Table A-12	Canada/Overseas Trade in Automotive Products (As reported by Statistics Canada)
Table A-13	Canada/Overseas Trade in Automotive Products Within and Outside the Auto Pact
Table A-14	Relationship Between Canada/U.S. Auto Pact Trade Imbalance and Canadian Value Added in Automotive Production as a Percentage of Canadian Cost of Sales

Table A-1

Total Employment in Canadian and U.S. Automotive Industries*

(1972-1981 and 1982 estimate***)

(thousands of workers)

CANADA	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
323 Motor Vehicle Manufacturers	44.0	46.8	49.4	45.3	49.1	52.5	51.1	51.9	44.9	44.3
3241 Truck Body Manufacturers	4.9	5.5	5.7	5.4	5.2	4.7	4.9	5.9	5.8	5.7
3243 Commercial Trailer Manufact.	2.9	3.1	3.6	2.9	2.8	3.3	3.8	4.5	4.3	3.5
Sub Total	51.8	55.4	58.7	53.6	57.1	60.5	59.8	62.3	55.0	53.5
325 Motor Vehicle Parts & Access.	46.2	52.8	49.6	42.6	47.3	49.8	56.6	55.0	46.3	49.3
188 Automobile Fabric Access.	5.2	5.8	5.8	4.8	5.6	6.5	6.9	6.2	5.7	6.4
Sub Total	51.4	58.6	55.4	47.4	52.9	56.3	63.5	61.2	52.0	55.7
Total	103.2	114.0	114.1	101.0	110.0	116.8	123.3	123.5	107.0	109.2
U.S.A.										
3711 Motor Vehicle & Car Bodies	339.2	388.8	320.2	282.5	324.3	342.6	359.1	348.4	274.2	271.9
3713 Truck & Bus Bodies**	42.6	45.6	36.9	35.9	41.4	51.2	36.4	35.5	33.5	29.6
3715 Truck Trailers	24.7	29.9	30.4	18.6	21.4	27.9	32.0	35.7	27.7	25.6
Sub Total	406.5	444.3	387.5	337.0	387.1	421.7	427.5	419.6	335.4	327.1
3714 Motor Vehicle Parts & Access.	400.9	444.1	410.1	362.0	410.0	451.3	475.8	459.0	369.1	359.4
3465 Automotive Stampings	123.3	135.4	121.7	107.4	123.1	131.9	136.7	125.3	105.7	95.1
3592 Carburetors, Pistons, Rings	26.7	32.5	31.9	29.6	31.1	31.5	33.3	36.2	32.5	32.9
3647 Vehicular Lighting Equipment	13.6	14.5	14.7	12.8	14.4	14.6	15.8	15.8	12.9	13.3
3694 Engine Electrical Equipment	57.9	63.7	61.5	53.0	57.7	63.0	70.1	64.4	54.5	53.5
2396 Automotive Apparel Trimmings	27.6	28.4	25.2	24.4	28.2	30.7	30.7	30.0	25.7	27.7
Sub Total	650.0	718.6	665.1	589.2	664.5	723.0	762.4	730.7	600.4	581.9
Total	1056.5	1162.9	1052.6	926.2	1051.6	1144.7	1189.9	1150.3	935.8	909.0
CANADA - U.S.A. TOTAL	1159.7	1276.9	1166.7	1027.2	1161.6	1261.5	1313.2	1273.8	1042.8	1018.2
CANADA as a % of Total	8.90	8.93	9.78	9.83	9.47	9.26	9.39	9.70	10.26	10.72

* See Appendix 2 for problems with these official statistics.

** Revised in 1977. Excludes Motor Homes.

*** Canadian automotive employment for 1982, estimated on the basis of preliminary Statistics Canada data, is 52,000 workers in the assembly industry and 50,900 workers in the automotive parts industry.

Source: Statistics Canada and U.S. Department of Commerce.

Table A-2

Production Workers in Canadian and U.S. Automotive Industries*

(1972-1981)

(thousands of workers)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
CANADA										
323 Motor Vehicle Manufacturers	30.6	32.8	35.1	31.7	35.1	38.6	37.2	39.0	32.5	32.9
3241 Truck Body Manufacturers	4.1	4.5	4.7	4.5	4.3	3.7	4.0	4.8	4.6	4.5
3243 Commercial Trailer Manufacturers	2.0	2.2	2.5	1.9	1.7	2.3	2.6	3.2	2.8	2.3
Sub Total	36.7	39.5	42.3	38.1	41.1	44.6	43.8	47.0	39.9	39.7
325 Motor Vehicle Parts & Accessories	37.9	44.1	41.2	34.9	39.1	41.2	47.3	45.3	37.1	39.7
188 Automobile Fabric Accessories	4.5	5.0	5.0	4.2	4.8	5.7	5.9	5.3	4.8	5.4
Sub Total	42.4	49.1	46.2	39.1	43.9	46.9	53.2	50.6	41.9	45.1
Total	79.1	88.6	88.5	77.2	85.0	91.5	97.0	97.6	81.8	84.8
U.S.A.										
3711 Motor Vehicle & Car Bodies	284.0	309.1	262.2	235.1	273.8	289.9	303.5	292.0	220.6	223.4
3713 Truck & Bus Bodies **	33.1	35.8	28.6	27.3	31.7	40.5	28.8	28.4	26.2	22.9
3715 Truck Trailers	19.7	23.9	24.2	13.9	16.4	22.5	25.7	28.3	21.1	20.0
Sub Total	336.8	368.8	315.0	276.3	321.9	352.9	358.0	348.7	267.9	266.3
3714 Motor Vehicle Parts & Accessories	332.3	371.1	337.1	294.4	339.9	372.5	390.9	372.9	287.2	285.2
3465 Automotive Stampings	103.0	114.1	102.1	90.0	104.1	112.5	116.6	106.4	88.5	79.2
3592 Carburators, Pistons, Rings	21.6	26.5	25.8	23.6	24.9	26.0	26.8	29.4	25.6	26.4
3647 Vehicular Lighting Equipment	10.7	11.5	11.5	9.9	11.2	11.4	12.5	12.5	9.8	10.0
3694 Engine Electrical Equipment	47.7	52.8	50.4	42.5	46.8	51.8	57.4	51.5	41.7	40.5
2396 Automotive, Apparel	23.2	24.0	20.3	19.9	23.6	26.3	26.3	25.2	20.8	22.7
Sub Total	538.5	600.0	547.2	480.3	550.5	600.5	630.5	597.9	473.6	464.0
Total	875.3	968.8	862.2	756.6	872.4	953.4	988.5	946.6	741.5	730.3
CANADA - U.S.A. TOTAL	954.4	1057.4	950.7	833.8	957.4	1044.9	1085.5	1044.2	823.3	815.1
CANADA as a % of Total	8.29	8.38	9.31	9.26	8.88	8.76	8.94	9.35	9.94	10.4

* See Appendix 2 for problems with these official statistics.

** Revised in 1977. Excludes Motor Homes.

Source: Statistics Canada and U.S. Department of Commerce.

Table A-3

Value of Shipments in Canadian and U.S. Automotive Industries*

(1972-1981)

($ millions)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
CANADA										
323 Motor Vehicle Manufacturers	4033.6	4715.8	5381.9	6024.4	7276.1	8610.4	10070.1	10724.4	10071.1	11402.8
3241 Truck Body Manufacturers	116.0	143.2	178.3	197.2	194.4	188.6	207.6	281.2	316.5	372.5
3243 Commercial Trailer Manufact.	92.4	108.9	138.4	117.0	110.3	151.8	218.5	313.3	301.9	259.1
Sub Total	4242.0	4967.9	5698.6	6338.6	7580.8	8950.8	10496.2	11318.9	10689.5	12034.4
325 Motor Vehicle Parts & Accessories	1903.2	2304.6	2281.1	2325.8	3112.3	3790.2	4692.0	4472.8	3609.7	4358.4
188 Automobile Fabric Access.	202.8	229.3	229.0	227.1	305.5	348.6	427.7	424.6	424.5	520.9
Sub Total	2106.0	2533.9	2510.1	2552.9	3417.8	4138.8	5119.7	4897.4	4034.2	4879.3
Total	6348.0	7501.8	8208.7	8891.5	10998.6	13089.6	15615.9	16216.3	14723.7	16913.7
U.S.A.										
3711 Motor Vehicle & Car Bodies	42905.6	50227.7	43868.5	45340.2	62717.4	76517.8	84900.9	85147.4	68257.4	74273.1
3713 Truck & Bus Bodies**	1564.4	1595.8	1471.3	1739.9	2342.4	3329.1	2292.5	2355.4	2123.1	2314.9
3715 Truck Trailers	1117.9	1369.5	1636.9	921.6	1297.3	1910.1	2498.0	3088.2	2435.8	2206.2
Sub Total (U.S. $)	45587.9	53193.0	46976.7	48001.7	66357.1	81757.0	89691.4	90591.0	70816.3	78794.2
3714 Motor Vehicle Parts & Access.	18333.5	21606.5	21656.0	22030.1	29024.4	35750.8	40199.7	39807.2	32881.2	37080.9
3465 Automotive Stampings	5286.0	6085.9	6183.0	6116.2	8078.5	9739.2	10697.6	10425.9	8497.3	8960.7
3592 Carburetors, Pistons, Rings	744.3	1017.6	977.3	1009.0	1256.3	1400.6	1608.5	1904.1	1838.8	2130.9
3647 Vehicular Lighting Equip.	499.8	577.4	596.0	590.6	771.1	908.5	1057.2	1061.5	876.0	956.3
3694 Engine Electrical Equip.	2035.0	2343.0	2388.1	2427.6	3100.3	3647.2	4097.9	4124.3	3684.3	4071.0
2396 Automotive Apparel Trimmings	1133.0	1289.4	1234.4	1283.1	1658.5	2166.3	2280.8	2287.4	1939.5	2286.1
Sub Total (U.S. $)	28031.6	32919.8	32956.8	33456.6	43881.1	53612.6	59941.7	59610.4	49717.1	55485.9
Total U.S.A.(U.S. $)	73619.5	86112.8	79933.5	81458.3	110238.2	135369.6	149633.1	150201.4	120533.4	134280.1
Total U.S.A. (CDN. $)	72920.1	86121.4	78175.0	82867.5	108705.9	143965.6	170611.7	175960.9	140903.5	161001.8
NORTH AMERICAN Total (CDN. $)	79268.1	93623.2	86383.7	91759.0	119704.5	157055.2	186227.6	192177.2	155627.2	177915.5
CANADA at a % of the Total	8.01	8.01	9.50	9.69	9.19	8.33	8.39	8.44	9.46	9.51

* See Appendix 2 for problems with these official statistics.
** Revised in 1977. Excludes Motor Homes.
Source: Statistics Canada and U.S. Department of Commerce.

Table A-4

Capital Expenditures in Canadian and U.S. Automotive Industries*

(1972-1982)

($ millions)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
CANADA											
Motor Vehicle Manufacturers	33.1	43.2	73.5	61.0	59.6	152.5	83.6	111.4	136.4	272.9	163.5
Truck Body Manufacturers	12.8	17.6	31.2	18.5	23.3	24.1	15.4	41.7	47.2	32.2	40.6
Sub Total	45.9	60.8	104.7	79.5	82.9	176.6	99.0	153.1	183.6	305.1	204.1
Motor Vehicle Parts & Accessories	55.9	78.7	119.9	81.2	62.5	109.6	203.9	330.9	780.9	666.5	189.8
Total	101.8	139.5	224.6	160.7	145.4	286.2	302.9	484.0	964.5	971.6	393.9
U.S.A.											
Motor Vehicles & Car Bodies	917.2	805.9	1042.9	655.7	1046.9	1807.7	1876.9	1905.6	2290.4	4697.2	NA
Truck & Bus Bodies**	48.3	29.5	34.5	28.1	31.2	56.1	39.3	48.0	35.7	44.1	NA
Truck Trailers	14.6	28.0	29.7	32.6	14.5	36.3	39.0	37.1	55.2	55.3	NA
Sub Total (U.S. $)	980.1	863.4	1107.1	716.4	1092.6	1900.1	1955.2	1990.7	2381.3	4796.5	NA
Motor Vehicle Parts & Accessories	1113.2	1033.6	1290.1	1114.4	962.1	1856.0	2457.4	2750.7	3093.0	3309.4	NA
Automotive Stampings	117.5	171.5	225.5	215.5	176.1	285.3	401.4	390.9	610.0	844.4	NA
Carburetors, Pistons, Rings	27.1	73.5	29.7	30.6	38.6	70.0	120.2	116.2	113.9	137.8	NA
Vehicular Lighting Equipment	7.2	33.7	46.6	15.2	21.4	46.2	41.2	51.1	51.1	70.0	NA
Engine Electrical Equipment	30.8	80.9	131.5	51.9	73.3	146.0	172.7	159.7	126.3	156.8	NA
Automotive, Apparel Trimmings	10.4	26.7	38.5	20.7	20.5	31.7	35.1	38.0	46.0	60.5	NA
Sub Total (U.S. $)	1306.2	1419.9	1761.9	1448.3	1292.0	2435.2	3228.0	3506.6	4040.3	4578.9	NA
Total U.S.A. (U.S. $)	2286.3	2283.3	2869.0	2164.7	2384.6	4335.2	5183.2	5497.3	6421.6	9375.5	NA
Total U.S.A. (CDN. $)	2264.6	2283.5	2805.9	2202.1	2351.1	4610.6	5909.9	6440.1	7506.9	11241.2	NA
Total North American (CDN. $)	2366.4	2423.0	3030.5	2362.8	2496.9	4896.8	6212.8	6924.1	8471.4	12212.8	NA
CANADA as a % of NORTH AMERICA	4.30	5.76	7.41	6.80	5.82	5.84	4.9	7.0	11.4	8.0	
Parts Industry	4.14	5.25	6.51	5.22	4.68	4.11	5.2	7.5	14.2	10.8	
Assembly Industry	4.51	6.58	8.82	9.84	7.14	8.04	4.3	6.2	6.2	8.0	

* See Appendix 2 for problems with these official statistics.
** Revised in 1977. Excludes Motor Homes.

Source: Statistics Canada and U.S. Department of Commerce.

Table A-5

Value Added in Canadian and U.S. Automotive Industries*

(1972-1981)

($ millions)

	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981
CANADA										
323 Motor Vehicle Manufacturers	906.8	1033.8	1338.9	1171.0	1351.0	1755.7	1973.2	2098.8	1618.8	1893.1
3241 Truck Body Manufacturers	54.3	63.6	79.9	91.3	84.6	84.4	90.7	123.2	133.7	156.9
3243 Commercial Trailer Manufact.	40.2	48.4	61.2	52.2	48.2	63.8	87.6	132.8	125.3	108.7
Sub Total	1001.3	1145.8	1480.0	1314.5	1483.8	1903.9	2151.5	2354.6	1877.8	2158.7
325 Motor Vehicle Parts & Access.	866.6	1031.9	1026.7	1008.4	1400.5	1713.8	2143.8	2110.9	1622.8	2093.0
188 Automobile Fabric Access.	92.6	101.6	105.1	101.4	139.8	163.0	199.2	186.7	194.9	248.0
Sub Total	959.2	1133.5	1131.8	1109.8	1540.3	1876.8	2343.0	2297.6	1817.7	2341.0
Total	1960.5	2279.3	2611.8	2424.3	3024.1	3780.8	4494.5	4652.2	3695.5	4499.7
U.S.A.										
3711 Motor Vehicle & Car Bodies	11782.5	13666.0	10949.4	10441.0	15843.7	18671.9	20490.6	20752.7	13817.4	15820.6
3713 Truck & Bus Bodies**	659.7	704.1	632.8	682.5	907.7	1306.5	996.1	1104.3	963.2	1005.7
3715 Truck Trailers	449.3	506.1	568.5	356.1	487.6	637.2	939.4	1134.9	834.3	654.5
Sub Total (U.S. $)	12891.5	14876.2	12050.7	11479.6	17239.0	20615.6	22426.1	22991.9	15614.9	17280.8
3714 Motor Vehicle Parts & Access.	9104.7	10041.3	10250.0	9986.3	13709.4	16265.3	18377.0	18033.5	14719.3	17260.6
3645 Automotive Stampings	2563.8	3141.3	3011.6	2872.4	3934.8	4642.8	5180.1	4940.0	4182.5	4444.7
3592 Carburetors, Pistons, Rings	500.0	669.5	625.0	637.9	841.4	900.5	1069.4	1295.7	1178.7	1363.9
3647 Vehicular Lighting Equip.	299.8	331.2	326.0	333.1	453.5	531.5	602.2	651.1	506.2	584.5
3694 Engine Electrical Equipment	1212.6	1385.9	1310.0	1295.1	1779.3	2017.0	2251.7	2253.1	1816.4	2168.3
2396 Automotive, Apparel Trimmings	530.8	585.2	524.8	551.5	782.6	996.1	1068.8	1057.0	869.3	1061.4
Sub Total (U.S. $)	14371.7	16754.4	16047.4	15676.3	21481.0	25352.4	28549.2	28230.4	23272.4	26883.4
Total (U.S. $)	27263.2	31630.6	28098.1	27155.9	38720.0	45968.0	50975.3	51222.3	38887.3	44144.2
Total (CDN. $)	27004.2	31633.8	27479.9	27625.7	38181.8	48887.0	58122.0	60006.9	45459.3	52928.9
CANADA - U.S.A. Total (CDN. $)	28964.7	33913.1	30091.7	30050.0	41205.9	52667.8	62616.5	64658.1	49154.8	57428.6
CANADA as a % of Total	6.77	6.72	8.68	8.07	7.34	7.18	7.18	7.19	7.52	7.84

* See Appendix 2 for problems with these official statistics. "Value added" in this table is not equivalent to Canadian value added as calculated with regard to the Auto Pact.

** Revised in 1977. Excludes Motor Homes.

Source: Statistics Canada and U.S. Department of Commerce.

Table A-6

Canadian Value Added in Automotive Production
Compared to Total Value of Canada/U.S.
Motor Vehicle Production for the Big Four
($ millions)

Year	Canadian Value Added in Motor Vehicles and Parts Including CVA in Exported O.E. Parts	Value of Motor Vehicle Production in Canada and U.S.A.	Canadian Value Added as a Percentage of Canada/U.S. Motor Vehicle Production
1964	785	21,449	3.7%
1965	956	28,390	3.4%
1966	1,135	27,276	4.2%
1967	1,145	24,660	4.6%
1968	1,357	31,006	4.4%
1969	1,621	31,632	5.1%
1970	1,643	24,572	6.7%
1971	1,710	33,177	5.2%
1972	2,006	36,238	5.5%
1973	2,340	42,781	5.5%
1974	2,449	37,170	6.6%
1975	2,716	42,494	6.4%
1976	3,346	55,534	6.0%
1977	4,006	72,229	5.5%
1978	4,518	87,127	5.2%
1979	5,001	87,003	5.7%
1980	4,164	65,730	6.3%
1981	4,836	70,363	6.9%

Note: Canadian value added data are model year data for the 12 months beginning on August 1st of the year previous, while the transfer value data for motor vehicles are calendar year data for the 12 months beginning on January 1 of the years noted.

Source: U.S. Department of Commerce, Statistics Canada and Auto Pact Reports.

Table A-7

Total Canadian Value Added by Category of Production for the Big Four

($ thousands)

Year	Non-parts C.V.A. in Vehicle Production a	Parts C.V.A. in Vehicle Production b	Original Equipment Parts Exported c	Total Canadian Value Added Produced d = a+b+c	Parts C.V.A. as Percentage of Total C.V.A. (b+c)/d
1964	319,294	429,687	36,496	785,477	59.4
1965	379,532	475,750	100,947	956,229	60.3
1966	398,154	537,554	198,943	1,134,651	64.9
1967	360,716	481,780	302,669	1,145,165	68.5
1968	418,490	493,666	444,895	1,357,051	69.2
1969	473,920	559,537	587,509	1,620,966	70.8
1970	482,821	509,910	650,575	1,643,306	70.6
1971	524,922	457,094	728,149	1,710,165	69.3
1972	564,178	562,676	879,228	2,006,082	71.9
1973	657,787	603,624	1,078,736	2,340,147	71.9
1974	739,987	640,285	1,069,117	2,449,389	69.8
1975	876,298	733,442	1,105,988	2,715,728	67.7
1976	1,053,265	724,808	1,568,273	3,346,346	68.5
1977	1,289,796	833,948	1,882,556	4,006,300	67.8
1978	1,435,608	948,744	2,133,323	4,517,670	68.2
1979	1,465,468	1,184,305	2,351,655	5,001,428	70.7
1980	1,321,865	1,086,625	1,755,138	4,163,628	68.2
1981	1,344,937	1,272,954	2,217,692	4,835,583	72.2
1982	1,456,898	1,232,880	2,256,222	4,946,000	70.6

Source: Department of Industry, Trade and Commerce and Regional Economic Expansion; 1964-1977 data prepared by Reisman Commission; 1978-1982 data prepared by Surface Transportation Branch.

Table A-8

Actual Canadian Value Added as a Percentage of Cost of Sales Compared to CVA Commitments of all Auto Pact Producers (1965-1973)

(Canadian $ millions)

	1965	1966	1967	1968	1969	1970	1971	1972	1973
Cost of Vehicle Sales in Canada of all Auto Pact Producers (model year)	1534	1716	1738	1977	2110	1891	1911	2371	3200
Total Canadian Value Added Produced (model year)	992	1186	1200	1420	1703	1743	1825	2145	2522
Difference Between Cost of Sales and CVA Produced	542	530	538	557	407	148	86	226	678
Total Achieved CVA as % of Cost of Sales	65%	69%	69%	72%	81%	92%	95%	90%	79%
Total CVA as a % of Cost of Sales Committed to by all Auto Pact Producers	58%	58%	58%	71%	70%	70%	69%	66%	64%

Source: Auto Pact Company Reports to Department of Industry, Trade and Commerce and Regional Economic Expansion.

Table A-8 (cont'd)

Actual Canadian Value Added as a Percentage of Cost of Sales Compared to CVA Commitments of all Auto Pact Producers (1974-1982)

(Canadian $ millions)

	1974	1975	1976	1977	1978	1979	1980	1981	1982
Cost of Vehicle Sales in Canada of all Auto Pact Producers (model year)	3795	4545	5345	6001	6727	8554	8757	8659	6327
Total Canadian Value Added Produced (model year)	2687	2987	3606	4337	4951	5491	4659	5388	5759
Difference Between Cost of Sales and CVA Produced	1108	1558	1739	1664	1776	3063	4020	3235	568
Total Achieved CVA as % of Cost of Sales	71%	66%	67%	72%	74%	64%	53%	62%	91%
Total CVA as a % of Cost of Sales Committed to by all Auto Pact Producers	62%	61%	61%	60%	59%	58%	57%	58%	59%

Source: Auto Pact Company Reports to Department of Industry, Trade and Commerce and Regional Economic Expansion.

Table A-9

International Sourcing Pattern of Original Equipment Parts of the Big Five Motor Vehicle Manufacturers*

(In Canadian $ millions)

MODEL YEAR	U.S. Purchases from In-house Suppliers in Canada (a)	Canadian Purchases from In-house Suppliers in U.S.A. (b)	Column (a) Less Column (b) (c)
1965	17.4	522.2	- 504.8
1966	163.7	599.5	- 435.8
1967	209.0	716.1	- 507.1
1968	356.3	1,008.5	- 652.2
1969	406.8	1,298.7	- 891.9
1970	453.6	1,153.3	- 699.7
1971	639.0	1,428.1	- 789.1
1972	763.2	1,556.4	- 793.2
1973	801.7	1,804.0	-1,002.3
1974	713.0	2,083.2	-1,370.2
1975	796.7	2,209.1	-1,412.4
1976	1,165.6	2,772.2	-1,606.6
1977	1,520.6	3,365.8	-1,845.2
1978	2,222.0	N.A.	N.A.
1979	2,361.7	4,702.8	-2,341.1
1980	1,604.1	3,991.7	-2,387.6
1981	2,118.7	4,957.2	-2,838.5
1982	2,891.7	5,374.2	-2,482.5

MODEL YEAR	U.S. Purchases from Independent Suppliers in Canada	Canadian Purchases from Independent Suppliers in U.S.A.	
1965	74.3	236.4	- 162.1
1966	112.3	279.8	- 167.5
1967	172.1	304.6	- 132.5
1968	327.4	405.2	- 77.8
1969	430.9	485.5	- 54.6
1970	487.3	505.4	- 18.1
1971	574.5	484.4	90.1
1972	699.3	558.9	140.4
1973	888.4	748.8	139.6
1974	771.4	846.9	- 75.5
1975	875.8	1,051.1	- 175.3
1976	1,221.6	1,283.5	- 61.9
1977	1,530.0	1,519.9	10.1
1978	1,537.8	N.A.	N.A.
1979	1,812.0	1,560.0	25.2
1980	1,253.4	1,226.1	27.3
1981	1,385.1	1,450.7	- 65.6
1982	1,476.9	1,843.8	- 366.9

* The Big Four auto makers and International Harvester.

Note: Canadian purchases are for use in vehicle assembly in Canada only. These figures do not include parts imported for further manufacture or parts imported for re-export either as parts or as CKD vehicles.

Source: Compiled from company responses to the Reisman Inquiry (1965-1977) and company Auto Pact reports (1979-1982). 1978 data not available from Auto Pact Reports.

Table A-10

Canada/U.S. Trade in Automotive Products

(as reported by Statistics Canada*)

(Canadian $ millions)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
U.S. IMPORTS FROM CANADA																	
Motor Vehicles	488	995	1603	2267	2127	2536	2752	3060	3407	3790	4774	5996	7033	6706	6670	8287	11116
Parts	389	512	846	1037	1127	1496	1778	2171	1953	2045	2942	3721	4746	4488	3405	4151	4902
Tires and Tubes	9	13	9	5	15	8	22	68	64	68	163	144	191	234	231	286	406
Total	886	1520	2458	3309	3269	4040	4552	5299	5424	5903	7879	9861	11970	11428	10306	12724	16424
CANADIAN IMPORTS FROM U.S.																	
Motor Vehicles	384	720	998	1055	934	1321	1551	2082	2531	3126	3291	3948	4360	5699	4605	5057	3748
Parts	1093	1314	1820	2307	2107	2485	2907	3553	3892	4522	5474	6847	8086	8659	7600	9230	9676
Tires and Tubes	10	8	29	37	24	36	50	92	219	174	115	153	130	155	146	165	147
Total	1487	2042	2847	3399	3065	3842	4508	5727	6642	7822	8880	10948	12576	14513	12351	14452	13571
BALANCES																	
Motor Vehicles	104	275	605	1212	1193	1215	1201	978	876	664	1483	2048	2673	1007	2065	3230	7368
Parts	(704)	(802)	(974)	(1270)	(980)	(989)	(1129)	(1382)	(1939)	(2477)	(2532)	(3126)	(3340)	(4171)	(4195)	(5079)	(4774)
Tires and Tubes	(1)	5	(20)	(32)	(9)	(28)	(28)	(24)	(155)	(106)	48	(9)	61	79	85	121	259
Total	(601)	(522)	(389)	(90)	204	198	44	(428)	(1218)	(1919)	(1001)	(1087)	(606)	(3085)	(2045)	(1728)	2853

* These figures are reconciled with U.S. automotive trade statistics. See Appendix 2.

Source: Statistics Canada.

Table A-11

Canada/U.S. Trade in Automotive Products Within and Outside the Auto Pact*

(1966–1974)

(Canadian $ millions)

		1966	1967	1968	1969	1970	1971	1972	1973	1974
U.S. IMPORTS FROM CANADA										
Under APTA	- Motor Vehicles	481.4	988.0	1588.0	2247.7	2115.4	2473.6	2738.1	3040.2	3391.0
	- Parts	338.8	458.2	789.4	953.6	1037.8	1386.2	1645.0	2048.0	1816.9
	- Sub-Total	820.2	1446.2	2377.4	3201.3	3153.2	3859.8	4383.1	5088.2	5207.9
Outside APTA	- Motor Vehicles	4.4	4.4	9.9	10.3	12.3	62.1	13.5	20.8	14.3
	- Parts	49.2	53.2	54.3	70.9	89.4	109.3	133.3	123.6	136.1
	- Tires and Tubes	8.6	12.9	8.6	5.4	14.6	8.1	21.8	68.0	63.6
	- Sub-Total	62.2	70.5	72.8	94.6	116.3	179.5	168.6	212.4	214.0
CANADIAN IMPORTS FROM U.S.										
Under APTA	- Motor Vehicles	371.3	772.9	1073.4	1120.8	880.3	1283.6	1538.7	2010.1	2443.9
	- Parts	989.7	1216.0	1705.7	2168.2	2005.4	2313.5	2718.5	3236.3	3546.6
	- Sub-Total	1361.0	1988.8	2779.1	3289.0	2885.7	3597.1	4257.2	5246.5	5990.5
Outside APTA	- Motor Vehicles	38.5	36.3	37.7	56.6	65.6	75.6	87.2	94.1	108.1
	- Parts	132.1	140.0	149.4	196.6	183.3	213.6	237.6	303.8	341.4
	- Tires and Tubes	9.7	7.6	29.1	36.8	24.0	36.4	50.5	92.0	218.1
	- Sub-Total	180.3	183.9	216.2	290.0	272.9	325.6	375.3	489.9	667.6
BALANCES										
Under APTA	- Motor Vehicles	110.1	215.1	514.6	1126.9	1235.1	1190.0	1199.4	1030.1	947.1
	- Parts	(650.9)	(757.9)	(916.3)	(1214.6)	(967.6)	(927.3)	(1073.5)	(1188.3)	(1729.7)
	- Total	(540.8)	(542.7)	(401.7)	(87.7)	267.5	262.7	125.9	(158.2)	(782.6)
Outside APTA	- Motor Vehicles	(34.1)	(31.9)	(27.8)	(46.3)	(53.3)	(13.5)	(73.7)	(73.3)	(93.8)
	- Parts	(82.9)	(86.8)	(95.1)	(117.7)	(93.9)	(104.3)	(104.3)	(180.2)	(205.3)
	- Tires and Tubes	(1.1)	5.3	(20.5)	(31.4)	(9.4)	(28.3)	(28.7)	(24.0)	(154.5)
	- Total	(118.1)	(113.4)	(143.4)	(195.4)	(156.6)	(146.1)	(206.7)	(277.5)	(453.6)

* These figures are not reconciled with U.S. automotive trade statistics. See Appendix 2.
Note: Imports from the U.S. include CKD parts.

Source: Compiled from data in the "Commodity Imports by Tariff Item" Series, Statistics Canada and various issues of the U.S. President's Report to the Congress on the Operations of the Canada-U.S. Automotive Agreement.

Table A-11 (cont'd)

Canada/U.S. Trade in Automotive Products Within and Outside the Auto Pact*

(1975-1982)

(Canadian $ millions)

		1975	1976	1977	1978	1979	1980	1981	1982
U.S. IMPORTS FROM CANADA									
Under APTA	- Motor Vehicles	3726.1	4703.6	5942.8	6972.0	6622.0	6612.2	8141.7	11023.1
	- Parts	1909.2	2766.6	3488.4	4421.0	4072.0	3008.1	3670.7	4292.4
	- Sub-Total	5635.3	7470.2	9431.2	1393.0	10694.0	9620.3	11812.4	15315.5
Outside APTA	- Motor Vehicles	60.5	69.1	51.4	61.0	84.0	56.3	118.7	93.2
	- Parts	131.4	174.9	112.7	325.0	417.0	374.0	398.4	602.3
	- Tires and Tubes	68.1	163.7	143.6	191.0	234.0	229.9	239.0	405.4
	- Sub-Total	260.0	407.7	307.7	577.0	735.0	660.2	756.1	1100.9
CANADIAN IMPORTS FROM U.S.									
Under APTA	- Motor Vehicles	3000.3	3129.7	3846.1	4283.0	5564.0	4542.6	4944.8	3705.2
	- Parts	4039.9	4800.8	6218.3	7425.0	7780.0	6890.3	8364.2	9055.8
	- Sub-Total	7040.2	7930.5	10064.4	11708.0	13344.0	11432.9	13309.0	12761.0
Outside APTA	- Motor Vehicles	277.6	201.3	206.2	77.0	135.0	148.6	236.2	101.6
	- Parts	356.6	578.8	511.7	661.0	879.0	712.6	908.6	722.2
	- Tires and Tubes	172.8	114.4	153.1	130.0	155.0	145.6	136.7	120.5
	- Sub-Total	807.0	894.5	871.0	868.0	1169.0	1006.8	1281.5	944.3
BALANCES									
Under APTA	- Motor Vehicles	725.8	1573.9	2096.7	2689.0	1058.0	2069.6	3196.9	7317.9
	- Parts	(2130.7)	(2034.2)	(2729.9)	(3004.0)	(3708.0)	(3882.2)	(4693.5)	(4763.4)
	- Total	(1404.9)	(460.3)	(633.2)	(315.0)	(2650.0)	(1812.6)	(1496.6)	2554.5
Outside APTA	- Motor Vehicles	(217.1)	(132.2)	(154.8)	(16.0)	(51.0)	(92.3)	(117.5)	(8.4)
	- Parts	(225.2)	(403.9)	(399.0)	336.0	462.0	(338.6)	(510.2)	(119.9)
	- Tires and Tubes	(104.7)	49.3	(9.5)	61.0	79.0	84.3	102.3	284.9
	- Total	(547.0)	(486.8)	(563.3)	(291.0)	(434.0)	(346.6)	(525.4)	156.6

* These figures are not reconciled with U.S. automotive trade statistics. See Appendix 2.

Note: Imports from the U.S. include CKD parts.

Source: Compiled from data in the "Commodity Imports by Tariff Item" Series, Statistics Canada and various issues of the U.S. President's Report to the Congress on the Operations of the Canada-U.S. Automotive Agreement.

Table A-12

Canada/Overseas Trade in Automotive Products*

(as reported by Statistics Canada)

(Canadian $ millions)

	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
CANADIAN EXPORTS																	
Motor Vehicles	110	100	133	108	141	114	117	126	204	421	427	614	711	558	634	656	440
Parts	42	53	68	91	99	85	88	119	142	180	171	195	314	445	420	556	404
Tires and Tubes	4	4	3	2	3	4	3	5	5	5	8	7	10	11	31	45	26
Re-Exports	6	9	11	10	9	7	6	8	7	10	10	10	9	21	89	436	390
Total	162	166	215	211	252	210	214	258	358	621	615	826	1044	1035	1174	1693	1260
CANADIAN IMPORTS																	
Motor Vehicles	111	114	177	245	240	374	464	377	450	410	522	592	894	727	1159	1599	1413
Parts	33	35	60	93	130	133	191	212	260	206	231	235	262	365	355	342	379
Tires and Tubes	5	7	10	13	19	27	42	57	70	82	79	110	146	202	208	187	115
Total	149	156	247	351	389	534	697	646	780	698	842	937	1302	1294	1722	2128	1907
BALANCES																	
Motor Vehicles	(1)	(14)	944)	(137)	(99)	(260)	(347)	(251)	(246)	11	(95)	22	(183)	(169)	(525)	(943)	(973)
Parts	9	18	8	(2)	(31)	(48)	(103)	(93)	(118)	(26)	(60)	(40)	52	180	65	214	25
Tires and Tubes	(1)	(3)	(7)	(11)	(16)	(23)	(39)	(52)	(65)	(77)	(71)	(103)	(136)	(191)	(177)	(142)	(89)
Re-Exports	6	9	11	10	9	7	6	8	7	10	10	10	9	21	89	436	390
Total	13	10	(32)	(140)	(137)	(324)	(483)	(388)	(422)	(82)	(227)	(111)	(258)	(259)	(548)	(435)	(647)

* CKDs are included sometimes in the parts category and sometimes in vehicle category.

Source: Statistics Canada.

Table A-13

Canada–Overseas Trade in Automotive Products Within and Outside the Auto Pact

(Canadian $ millions)

		1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982
CANADIAN EXPORTS TO OVERSEAS																		
Under APTA	- Motor Vehicles	101.3	89.3	120.8	98.0	123.0	97.8	102.0	109.5	177.5	356.5	376.0	546.5	648	505	357.5	538.2	367.1
	- Parts	36.0	42.8	49.5	66.8	72.0	60.8	63.8	85.5	102.8	132.8	128.3	146.3	235	341	665.1**	396.0*	791.0
	- Total	137.3	132.1	170.3	164.8	195.0	158.6	165.8	195.0	280.3	489.3	504.3	692.8	883	846	1022.6	934.2	1158.1
Outside APTA	- Motor Vehicles	6.7	8.7	11.2	10.0	19.0	16.2	15.0	16.5	26.5	64.5	51.0	67.5	63	49	-	101.8	73.0
	- Parts, Tires and Tubes	16.0	18.2	19.5	24.2	27.0	24.2	24.2	33.5	39.2	49.2	50.7	55.7	98	156	-	635.0*	29.0
	- Total	22.7	26.9	30.7	34.2	46.0	40.4	39.2	50.0	65.7	113.7	101.7	123.2	161	205	151.4**	736.8	102.0
CANADIAN IMPORTS FROM OVERSEAS																		
Under APTA	- Motor Vehicles	1.9	2.2	8.2	12.2	7.7	31.8	43.6	51.7	51.5	40.8	65.7	73.3	116.8	44.6	152.7	145.8	272.4
	- Parts	6.0	8.2	11.5	14.2	32.1	39.1	64.9	63.4	91.3	109.6	127.8	128.9	108.6	169.2	143.3	138.8	195.6
	- Total	7.9	10.4	19.7	26.4	39.8	60.9	108.5	115.1	142.8	150.4	191.5	202.2	225.4	213.8	296.0	284.6	488.0
Outside APTA	- Motor Vehicles	86.8	86.6	180.5	265.2	266.4	355.3	436.7	350.7	405.4	262.8	481.5	563.0	777.2	672.6	1013.6	1454.1	1117.1
	- Parts, Tires and Tubes	26.5	26.8	36.0	46.6	67.1	105.2	107.5	129.7	148.8	158.6	163.3	203.9	299.6	394.8	357.9	328.7	222.8
	- Total	113.3	113.4	216.5	311.8	333.5	460.5	542.2	480.0	554.2	421.4	644.8	766.9	1076.8	1067.4	1371.5	1782.8	1340.3
BALANCES																		
Under APTA		129.4	121.7	150.0	138.4	155.2	97.7	57.3	79.9	137.5	338.9	310.8	490.6	657.6	632.2	726.6	649.8	890.1
Outside APTA		(90.6)	(86.5)	(185.8)	(277.6)	(287.5)	(420.1)	(503.0)	(403.4)	(488.5)	(307.7)	(543.1)	(643.7)	(915.8)	(862.4)	(1220.1)	(1046.0)	(1238.3)

* Includes Canadian CKD Parts.
** Classification problem in export of CKD parts and vehicles.

Source: Department of ITC/DREE.

Table A-14

Relationship Between Canada/U.S. Auto Pact Trade Imbalance and Canadian Value Added in Automotive Production as Percentage of Canadian Cost of Sales

Year	Canadian Value Added as Percentage of Cost of Sales in Canada (model year)	Canada Auto Pact Trade Imbalance of % of Total Canada/U.S. Auto Pact Trade (calendar year)
1966	69	- 24.7
1967	69	- 15.8
1968	72	- 7.8
1969	81	- 1.4
1970	92	4.4
1971	95	3.5
1972	90	1.5
1973	79	- 1.5
1974	71	- 7.0
1975	66	- 11.1
1976	67	- 3.0
1977	72	- 3.2
1978	74	- 1.4
1979	64	- 11.0
1980	53	- 8.6
1981	62	- 6.0
1982	91	9.1

Source: Data from Tables A-8 and A-11.

APPENDIX 6

AUTOMOTIVE TRADE RESTRICTIONS

(by country)

COUNTRY	DOMESTIC CONTENT REQUIREMENTS* Yes	DOMESTIC CONTENT REQUIREMENTS* No	PASSENGER CAR TARIFF RATE BOUND UNDER GATT	QUANTITATIVE IMPORT RESTRICTIONS	EXPORT REQUIREMENTS
NORTH AMERICA					
Canada		x	12.1%-1983 11.4%-1984 10.7%-1985 9.9%-1986 9.2%-1987	Japan voluntarily restrained exports of passenger cars to Canada to 174.213 units for April 1, 1981 to March 31, 1982 and to 170, 789 units for April 1, 1982 to March 31, 1983. An interim understanding has been reached for the first six months of 1983 based on a level of 79,000 cars.	None
United States		x	Phased-in reduction: 2.8% in 1983 to 2.5% by 1987	Japan voluntarily restrained exports of passenger cars to 1,680,000 units annually for fiscal years 1981/82 through 1983/84.	None
WESTERN EUROPE		x	10.5%	In 1981, Japan voluntarily restrained exports to 109,000, 7% below 1980. This arrangement was reportedly also extended to 1982.	None
Belgium					
France		x	10.5%	Passenger car imports from Japan limited to 3% of market through informal administrative measures.	None
West Germany		x	10.5%	In 1981, Japan agreed voluntarily to restrain passenger car exports to the 1980 level plus 10% growth. Although this limit was not actually tested due to market conditions, the arrangement was reportedly extended into 1982.	None

* See explanatory footnotes.

COUNTRY	DOMESTIC CONTENT REQUIREMENTS* Yes	DOMESTIC CONTENT REQUIREMENTS* No	PASSENGER CAR TARIFF RATE BOUND UNDER GATT	QUANTITATIVE IMPORT RESTRICTIONS	EXPORT REQUIREMENTS
Italy		x	10.5%	Passenger car imports from Japan limited by quota to 2,200 cars per year. Italy retained this quota on Japanese cars under Article 35 of the GATT as a result of agreement when Japan acceded to the GATT in 1955.	None
Spain	x		64% - Bound Rate; 50% - MFN rate (for GATT members); 36% - EEC countries	Although import quotas have been phased out, import licences are still required.	Agreements with companies (e.g., Ford and GM) usually require that 2/3 of production be exported.
Portugal	x		1400-1700cc-60% 1701-2000cc-90% 2000cc + -120%	Complex system of quotas by company to be phased out by 1985.	None
United Kingdom		x	10.5%	Industry to industry agreement to limit Japanese auto imports to 10-11% of the market.	None
Sweden		x	10%	None	None
The Netherlands		x	10.5%	None	None
CENTRAL AND SOUTH AMERICA					
Mexico	x		100% (not a GATT member)	Generally, auto parts and vehicles can only be imported under stringent import licensing system tied to local content régime.	For vehicle producers, difference between minimum local content (50% for cars and 65% for commercial vehicles) and recommended local content of 75-90% must be generated by exports.

COUNTRY	DOMESTIC CONTENT REQUIREMENTS*		PASSENGER CAR TARIFF RATE BOUND UNDER GATT	QUANTITATIVE IMPORT RESTRICTIONS	EXPORT REQUIREMENTS
	Yes	No			
Venezuela	x		120% (not a GATT member)	Imports of 8-cyclinder autos and autos of a type not produced locally are prohibited. Other imports subject to licence.	Duty-free entry of auto parts is permitted on a dollar-for-dollar basis equal to parts exports.
Colombia	x		180%	Import licences required.	
Brazil	x		185-205% (not bound by GATT)	Import licences required.	Import licences (e.g., for components) are based in part on export performance commitments.
Chile	x		Tariff rate scheduled to decline from 50% currently to 10% by 1986	Import licences required.	When producer's local content is less than 30%, they must export sufficient products to reach 30% level.
Argentina	x		55%	Imports by company are limited by an export/import ratio requirement for intra-corporate trade.	Export requirements apply only to intercompany parts shipments; exports must be 3 times the import level.

* See explanatory footnotes.

COUNTRY	DOMESTIC CONTENT REQUIREMENTS* Yes	No	PASSENGER CAR TARIFF RATE BOUND UNDER GATT	QUANTITATIVE IMPORT RESTRICTIONS	EXPORT REQUIREMENTS
ASIA/PACIFIC					
Australia	x		(not bound) 57.5%	Quota action taken under Article 19 of the GATT (temporary emergency import relief action) limits imports of autos to 20% of existing market. Some liberalization of this quota is scheduled under a new government assistance program for the industry.	Under Export Facilitation Scheme, car producers allowed to credit exports against local content requirements. The credit limit is now 6.25% and will be 15% by 1987. Export credits can be used to import components duty-free.
New Zealand	x		55% - CBU 45% - CKD	Strict import licensing régime which mandates the use of local components in domestic CKD production. Import licences for autos ensure CBU imports take only 4-5% of market.	None
Japan		x	3%	None	None
South Korea	x		80%	Autos and components are on "restricted list" with stringent import licence system.	None
India	x		(not bound) 100%-140%	Automobile imports prohibited under licence system with rare exceptions.	Import licences for components are dependent to some extent on export performance.

* See explanatory footnotes.

COUNTRY	DOMESTIC CONTENT REQUIREMENTS*		PASSENGER CAR TARIFF RATE BOUND UNDER GATT	QUANTITATIVE IMPORT RESTRICTIONS	EXPORT REQUIREMENTS
	Yes	No			
Indonesia	x		(not bound) 200% - CBU 100% - CKD (plus 20% imports sales tax on both CBU and CKD autos)	Import licences required.	None
Philippines	x		(Not bound) 30% CBU	Import licences required.	None
Malaysia		x	60–100% depending on price	Import licences required.	None
AFRICA					
South Africa	x		100%	Import licences restrict imports to only top end of market (e.g., Rolls Royce).	None

* See explanatory footnotes.

Source: Compiled by Department of ITC/DREE from Canadian consular reports and other sources.

Explanatory Footnotes on Domestic Content Requirements

Spain: A 1979 government decree sets out content and export requirements for two categories of auto manufacturers: 1) Producers who commenced production in Spain prior to November 30, 1972 (SEAT, FASA-Renault, Citroen-Hispania and Talbot) have a local content requirement of 60% of factory cost and the value of exports of finished vehicles and components must exceed by 20% the value of vehicles and components imported. 2) For future producers or those that commenced production after November 30, 1972 (e.g. Ford, GM): a) local content must be at least 55 per cent of factory cost; b) the value of finished vehicle and component exports must exceed by 20% the value of vehicles and components imported. Finished vehicles must be at least two-thirds of annual production.

Portugal: Portuguese content regulations provide that assembly of motor vehicles is subject to the use of certain minimum percentages of domestic components to be scaled down from 1980 to 1984 as follows: (for cars and trucks under 2000 kg): 1980 -20%, 1981 - 19%, 1982 - 16%, 1983- 13%, and 1984 - 10%. The minimum content for trucks over 2000 kg will remain at 20% for an indefinite period.

Mexico: The 1977 Automotive Decree established two sets of local content requirements: 1) minimum local content of 50% for cars and 65% for commercial vehicles to be met for each individual model of vehicle based on components incorporated, i.e., excluding assembly costs; and 2) recommended local content levels of 75% for autos and 85% for commercial vehicles. The difference between the recommended and minimum content must be generated by exports; 50% of total exports required to be from local independent parts manufacturers. The assembly cost portion of content is not included in calculations and vehicle exports are also disallowed from export credits. Content requirements also disallowed from export credits. Content requirements also apply to parts manufacturers, who must normally have a minimum of 80% local content in order for the vehicle companies to get credit for purchasing these parts. Mexico also has requirements for the auto assemblers in the following areas: export compensation, lists of mandatory local parts, foreign currency budgets, and mandatory advance notification of parts requirements.

Venezuela: Local assembly plants must incorporate a minimum of 43% Venezuelan auto parts in their cars at present, increasing to 59% in 1985. Although the plan is to achieve 90% by 1990, this target may prove elusive and it is more likely that 65-70% local content will be attained.

Colombia: Local content requirements of 33% are enforced by prohibitive customs duties, as well as import licences.

Brazil: Domestic content regulations are in effect but are now individually negotiated with each firm, with factors such as the individual company's balance of payments being taken into account (the local content requirement is usually 95%).

Chile: Local content requirements were as high as 75% but have now been reduced to a 30% level. If local content is less than 30%, the local assemblers must export sufficient products to reach the 30%. Chile is currently liberalizing its restrictive import régime on a phased basis in order to give local industry time to become competitive or discontinue operations.

Argentina: Domestic content requirements vary from model to model and are constantly adjusted in line with local production (recent requirements were for 88% content in cars and 75-88% in commercial vehicles). Parts are imported according to the needs of the industry and the replacement market, but subject to the local content requirements as well as the export/import ratio requirements that exist for intra-corporate trade (i.e., exports required at three times the import level).

Australia: Vehicle producers must maintain 85% company average local content in order to obtain relief from prohibitive duties on imported components. Under a recently introduced export facilitation scheme, local manufacturers are also allowed to earn duty-free imports for components on a dollar-for-dollar basis, by exporting Autralian-made components. The limit of these credits will be 7.5 percentage points of total content by 1984 and 15% by 1987. If an assembler used this export scheme to its fullest extent in 1987, therefore, the company could reduce its required in-vehicle domestic content to 70%.

New Zealand: The automotive industry in New Zealand has developed under the influence of a strict import licensing régime and a CKD Ministerial determination system that mandates what local components must be included in local CKD production and which components can be imported as part of a CKD pack. The import system has been alternately tightened and loosened depending on several factors, including balance of payments considerations, the domestic parts industry capability and the ability of domestic assembly facilities to meet consumer demand.

South Korea: The degrees of local content required under Korean law range from 90% for compact cars to just over 60% for medium size cars. Under a recently announced government "localization" plan in various industries, domestic content in the auto sector is to reach 95% by 1986. The Korean local content requirements are based on in-vehicle content and allow no offset or credit for parts exports, although exports are strongly encouraged through a system of company targets as well as in administration of the import licence system.

India: India reportedly has very high domestic content requirements for their auto assemblers (close to 100% in most cases). The Indian vehicle assembly industry is limited to domestically controlled firms, and import licences for both vehicles and parts are issued on only a limited basis.

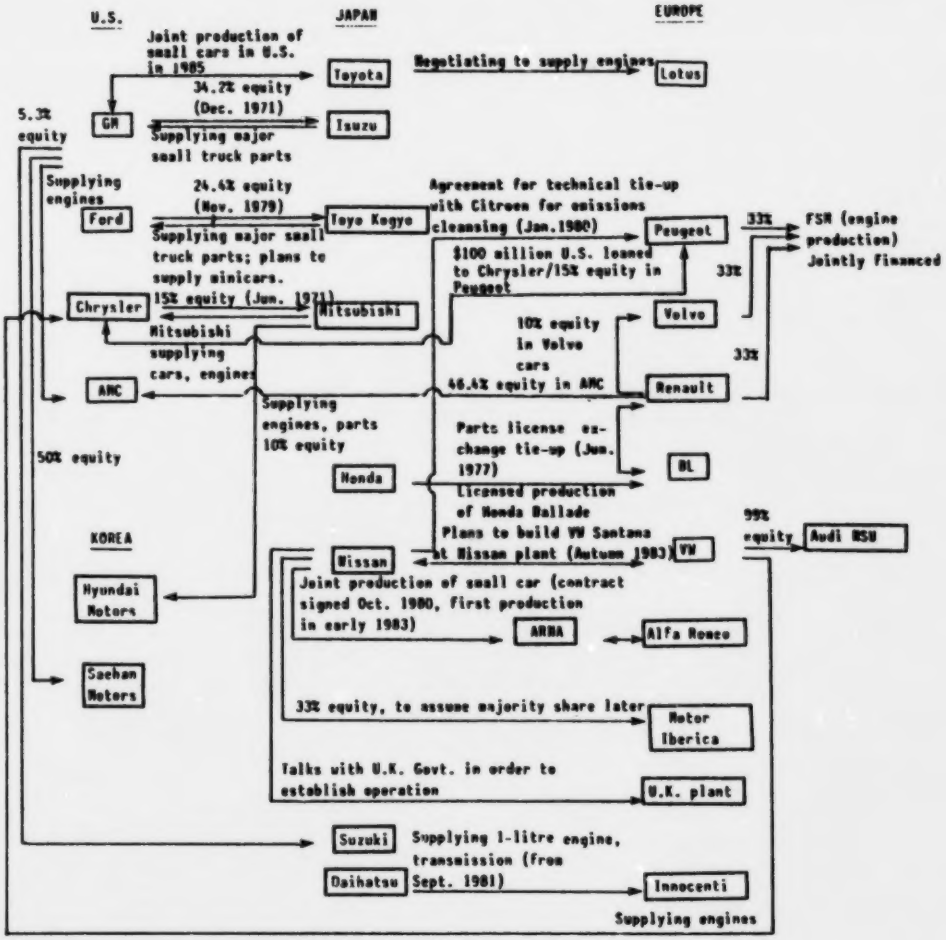
Indonesia: Progressively stronger local content regulations are being instituted although lags in component manufacture are slowing implementation. Although there are no fixed domestic content requirements in percentage terms, government regulations require that assemblers use local components whenever they are available and suitable for use.

Philippines: The current required average domestic content is 62.5%, which is met through incorporation of local componentry into CKD vehicle assembly operations and administered through the import licensing régime.

South Africa: The minimum local content requirement for cars and light trucks is 66% by weight while heavy commercial vehicles must have 35% local content by weight (as well as engines, gearboxes and axles of local manufacture).

APPENDIX 7

A Partial Listing of International Linkages Among Major Automakers



Source: Adapted with some Task Force additions from "The Motor Industry of Japan 1982", Toyota Motor Sales.

APPENDIX 8

TASK FORCE CONSULTATIONS

In addition to the 18 private meetings at which the members of the Task Force met to discuss our findings and prepare our report, the Task Force or the co-chairmen met with the following individuals and organizations to seek their views and received submissions from a number of groups whose names are appended.

Location/Date	Name of Organization/Individual
Toronto	
4 November 1982	Hon. Ed Lumley, P.C., M.P. Minister of Industry, Trade & Commerce/Regional Economic Expansion
7 January 1983	Martin Anderson Executive Officer Future of the Automobile Program Massachusetts Institute of Technology
Montreal	
13 January 1983	Keith Dixon President Automobile Importers Association of Canada
Toronto	
21 January 1983	Kim Clark Assistant Professor Harvard Business School
Washington, D.C.	
26 January 1983	Canadian Embassy staff
	House of Representatives Energy and Commerce Committee staff
	House of Representatives Ways and Means Sub-committee staff

Location/Date	Name of Organization/Individual
Washington, D.C.	
26 January 1983	Michael Driggs Deputy Assistant Secretary of Commerce for Automotive Affairs U.S. Department of Commerce
	Douglas Fraser President United Auto Workers
	Bill Krist Assistant Director, Industrial Development Bill Merkin Director, Canadian Affairs Office of the U.S. Trade Representative
27 January 1983	Senate Finance Committee International Trade Sub-committee staff
	Senate Commerce, Trade and Transportation Committee staff
	Lee Price Research Director United Auto Workers
	Alan Gotlieb Canadian Ambassador to the United States
	U.S. Motor Vehicle Manufacturers' Association
28 January 1983	Toskihiro Iwatake Director Japanese Automobile Manufacturers' Association
Quebec City	
1 March 1983	Hon. Rodrigue Biron Minister of Industry, Trade and Tourism

Toronto

7 March 1983	Canadian Automotive Leasing Association
16 March 1983	Tom Buchanan Executive Director Canadian Association of Japanese Automobile Dealers
	Robert B. Attrell President Guild Toyota
	The Canadian Steel Industry: Representatives from Algoma Steel, Atlas Steels, Dofasco Inc., and Stelco Inc.
12 April 1983	Hon. William Davis, P.C. Premier of Ontario
14 April 1983	Japanese Automobile Manufacturers (Honda Canada Inc., Mazda Canada Inc., Nissan Automobile Company (Canada) Ltd., Subaru Auto Canada Ltd., Suzuki Canada Inc., Toyota Canada Inc.)

Submissions Received

The Automobile Protection Association

The Canadian Association of Japanese Automobile Dealers

The Canadian Automotive Leasing Associaton

Canadian Steel Companies
(Algoma Steel, Atlas Steels,
Dofasco Inc., and Stelco
Inc.)

Gino F. Francolini
Vice Chairman of the Board
Livingston International Limited

Japanese Automobile Manufacturers
(Honda Canada Inc., Mazda Canada
Inc., Nissan Automobile Company
(Canada) Ltd., Subaru Auto Canada
Ltd., Suzuki Canada Inc., Toyota
Canada Inc.)

The Society of the Plastics Industry of Canada